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# 2008 Annual Report

Sunnyside Cogeneration Associates Sunnyside Refuse and Slurry C/007/035





# SUNNYSIDE COGENERATION ASSOCIATES SUNNYSIDE REFUSE/SLURRY C/007/0035 2008 ANNUAL REPORT

#### Submitted to:

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

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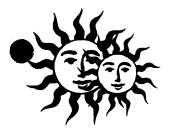
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## **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

May 14, 2009

Darron Haddock Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

Annual Report for 2008 RE:

SCA Sunnyside Mining Permit, C/007/035

Dear Mr. Haddock:

Please find enclosed two copies of SCA's Annual report for 2008, for coal mining and reclamation operations at the SCA Sunnyside site. This report is inclusive of the activities that occurred within the SCA Sunnyside Mining Permit area during 2008.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blakey

Agent For

Sunnyside Cogeneration Associates

Steve Gross CC. William Rossiter Maggie Estrada Paul Shepard Rusty Netz Plant File

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#### SUNNYSIDE COGENERATION ASSOCIATES

#### SUNNYSIDE REFUSE/SLURRY 2008 ANNUAL REPORT

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#### I. GENERAL PERMIT INFORMATION

**Permit Number:** 

C/007/0035

Mine Name:

Sunnyside Refuse/Slurry

Permittee:

Sunnyside Cogeneration Associates

**Company Representative** 

& Resident Agent:

Mr. Michael J. Blakey

One Power Plant Road

PO Box 159

Sunnyside, UT 84539

(435) 888-4476 (435) 888-2538 fax

**Date of Initial Permanent Program Permit:** 

February 4, 1993

**Date of Most Recent Permit Renewal:** 

February 4, 2008

(See renewal letter in Appendix E-1)

Date of Expiration:

February 4, 2013



#### II. IDENTIFICATION OF OTHER PERMITS

MSHA ID Numbers: Sunnyside Waste Coal Site 42-02093

Coarse Refuse Pile 1211-UT-09-02093-01

Excess Spoil Disposal Area #1 1211-UT-09-02093-04

Excess Spoil Disposal Area #2 1211-UT-09-02093-05

**UPDES Permit Number:** UT0024759 Renewed effective August 1, 2007

Expires July 31, 2012

Air Quality Title V Operating Permit: #700030001

SCA renewed its Title V permit in 2007. Most of the emissions are associated with the power plant adjacent to the SCA Sunnyside mining permit area. The mining operation generates little to no emissions. However the Operating Permit covers all of SCA's operations in Sunnyside.



#### III. CERTIFIED REPORTS

Each impoundment as well as the Refuse Pile and Excess Spoil Disposal Areas was inspected in accordance with the requirements of the Mining and Reclamation Permit. The quarterly and annual inspection / certification reports were submitted to the Division throughout the year. These reports are also included in **Appendix A**.

All of the impoundments met or exceeded the storage capacity requirements identified in the permit. No discharges occurred from any of the impoundments during 2008.

All of the spoils materials and coal reject materials generated during 2008 were placed in the Excess Spoil Disposal Area #2. No new materials were placed in the Excess Spoil Disposal Area #1. Construction is progressing in general conformance with design requirements as currently approved.

SCA gathered soil samples from the Excess Spoil Disposal Area #2 during 2008. The analytical test results are included with this report in **Appendix B2**.

Excavation of Coarse and Fine Refuse from the Refuse Pile occurred in general conformance with the operational criteria and performance standards established in the permit.



#### IV. REPORTING OF OTHER TECHNICAL DATA

#### 1. Climatological Data

SCA has obtained precipitation and climatological data for 2008 from the Sunnyside Weather Station operated by the City of Sunnyside. A summary table identifying this data is included in **Appendix B-1**.

#### 2. Subsidence Monitoring Data

No subsidence monitoring is required by the approved plan. No material damage or diminution within the Permit Area will be caused by subsidence because no underground coal resources are available within the permit area that would cause subsidence. No past or future underground coal mining operations have or are likely to occur within the SCA Permit Area.

#### 3. Vegetation Monitoring Data

During 2008, no new areas received final reclamation treatment. In an effort to perform contemporaneous reclamation, SCA is committed to reclaim areas of two acres or larger that are permanently excavated of waste, and are no longer needed for the continued operations. There are currently no areas that meet these criteria.

In 2007, SCA performed quantitative sampling of the Old Coarse Refuse Road that was reclaimed in 1994. This sampling was conducted with the anticipation that SCA could submit an application for Final Phase III Bond Release with the 2006 data set being used as "Year 1" and the 2007 data set as "Year 2" of the two consecutive years of vegetation monitoring necessary to apply for bond release.

The report prepared to document this revegetation monitoring was submitted with the 2007 annual report to DOGM. The report indicates that the reclaimed road has established an adequate plant community to be considered for Phase III or Final Bond Release. SCA has not yet filed the paperwork necessary to request final bond release.

Interim reseeding has been performed in previous years on several areas throughout the permit site. This interim seeding was accomplished using the approved interim seed mix included in the permit. These areas previously reseeded with the interim revegetation seed mix have been periodically checked by SCA and appear to have vegetative growth similar to the surrounding area.



#### 4. Raptor Surveys and Wildlife Programs

Discussions were held in 1998 with the Division concerning whether or not raptor surveys would be needed. Both the permittee and the Division have agreed that, considering the location of the permit site and the ongoing nature of SCA's activities, it is highly unlikely that the mining and reclamation activities of SCA would negatively affect raptor nesting sites. Therefore, raptor studies would have little value and are not required by the approved permit. Hence, no raptor studies have been performed.

SCA is committed to carrying out its operations in a manner that minimizes potential impact on wildlife in the area. These operations are centered on excavation and hauling activities in and around the coal pile and storage areas. These operations continue to be performed in a manner that does not prevent the necessary migration of large mammals. No additional efforts have been requested by DOGM to provide for migration routes.

SCA also provides periodic wildlife awareness training during employee staff meetings to educate all employees associated with the site activities regarding the values of the wildlife resources associated with the local area. Employee training advises against unnecessary harassment or taking of wildlife on site.

#### 5. Water Monitoring Data

As required in the approved plan, SCA performed quarterly water monitoring at the specified surface and ground water monitoring locations. These sites were analyzed according to the Operational Water Quality Monitoring Parameters listed in the MRP (Appendix 7-8). SCA has prepared an analysis of the water quality obtained during the period 2003-2008 for comparison with the data obtained during the 1993-1995 Baseline Monitoring Period and the 1996-2002 Operational Monitoring Period. The results of these analyses indicate that the water quality has remained in general similarity to that observed during the prior monitoring periods. This analysis report is included in Appendix B-4 of this annual report. A summary of the 1993-1995 Baseline water quality data is included in the MRP as Appendix 7-4. A summary of the 1996-2002 Operational water quality data is included in the MRP as Appendix 7-10.

The water data from each of the quarterly monitoring periods was submitted to the Division throughout the year. An additional copy of the data has been included in **Appendix B-3** of this report.



#### 6. Geological / Geophysical Data

No periodic Geological / Geophysical monitoring is required in the approved plan. The data included as resource information in the plan is considered adequate for the operations of SCA. In the event that the operations of SCA change dramatically such that additional geologic or geophysical data becomes necessary, additional analysis will be performed at that time.

#### 7. Engineering Data

#### a. Refuse Excavation

During 2008, SCA excavated 268,786 tons from the Sunnyside permit area. Of that, 35,439 tons was rejected to the Excess Spoil Disposal Area #2. The Sunnyside facility also received 251,600 tons from the Star Point facility;

#### b. Excess Spoils Disposal Area #1

No new material was placed in this disposal area during 2008.

#### c. Excess Spoil Disposal Area #2

Placement and compaction of fill material occurred in this disposal area throughout 2008. Materials placed in the disposal area consist mostly of coarse refuse rejects, but also include some general spoils material. Approximately 35,439 tons of material were placed in this disposal area during 2008. ( $1^{st}$  qtr -11,557,  $2^{nd}$  qtr -8,532,  $3^{rd}$  qtr -7,583 tons,  $4^{th}$  qtr -7,767 tons). Lab analysis of samples taken of material placed in the site during the  $2^{nd}$  quarter 2008 is included in Appendix B2 of this report.

Inspections of the refuse area and both spoils areas are conducted on a quarterly basis. Reports from these site visits are submitted to the Division throughout the year and have been included in this report with the certified reports.



#### 8. Soils Monitoring Data

No periodic soil monitoring is required by the approved plan. The approved borrow areas reserved for reclamation activities have previously undergone soils studies from which the data is included in Chapter 2 of the Permit.

In the event that SCA determines it necessary to utilize soils from other sources for reclamation, the proper analysis will be performed at that time.

#### 9. Other Data

No additional periodic data is required in the approved plan.



## V. LEGAL, FINANCIAL, COMPLIANCE & RELATED INFORMATION

Sunnyside Cogeneration Associates is a joint venture between Sunnyside Holdings I, Inc. and Sunnyside II, L.P. **Appendix C** includes copies of the Certificates of Existence for Sunnyside Cogeneration Associates, Sunnyside Holdings I. Inc. and Sunnyside II, L.P. The Utah Department of Commerce, Division of Corporations and Commercial Code issues these certificates. They demonstrate that the entities are in good standing with the State of Utah.



#### VI. MINE MAPS

The mine map included in **Appendix D** of this report provides a contours and a photograph showing the surface configuration of the refuse area being excavated. This refuse is then utilized as fuel for the adjacent Cogeneration Facility. The aerial survey used to generate contours of the site was performed in April 2007. A photograph from April 2009 of the active mining area has been added to the map to further show conditions.

Mining excavation of the refuse pile has occurred in general conformance with the approved mining plan since the date of the aerial survey and photograph.

Mining activity proposed for the next five years is projected to occur in conformance with the mining plan shown on the PE Certified drawings approved in the Mining and Reclamation Permit.



# APPENDIX A CERTIFIED REPORTS



## APPENDIX A CERTIFIED REPORTS

## FIRST QUARTER INSPECTION

## IMPOUNDMENTS, REFUSE PILE AND DISPOSAL AREAS



## **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

April 17, 2008

Daron Haddock Utah Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

RE: First Quarter 2008 Inspection Report Sunnyside Refuse Pile C/007/035

Dear Daron:

Please find enclosed a copy of the First Quarter 2008 Inspection Report for Sunnyside Cogeneration Associates' impoundments, refuse pile and excess spoil areas.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blake

Agent For

Sunnyside Cogeneration Associates

c.c. Steve Gross
William Rossiter
Paul Shepard
Ramiro Garcia
Rusty Netz
Plant File

**GENERAL INFORMATION** 

**Railcut Sediment Pond** 

Report Date

April 9, 2008

**Permit Number** 

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

**Sunnyside Cogeneration Associates** 

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**RailCut Sediment Pond** 

Impoundment Number

007

**UPDES Permit Number** 

UT024759

MSHA ID Number

<u>N/A</u>

#### IMPOUNDMENT INSPECTION

**Inspection Date** 

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

## 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 4.8 Acre-feet

Pond bottom elevation = 6206.0

100% Sediment Storage Volume = 0.34 acre-feet at Elevation 6209

60% sediment Storage Volume = 0.2 acre feet at Elevation = 6207.7

Existing Sediment Elevation = 6206.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6209.07

Emergency Spillway Elevation = 6212.34

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment levels were good

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.



#### **Rail Cut Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

#### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other baserdous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

#### **Old Coarse Refuse Road Sediment Pond**

#### **GENERAL INFORMATION**

Report Date A

April 9, 2008

Permit Number

<u>C/007/035</u>

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Old Coarse Refuse Road Sediment Pond

Impoundment Number

008

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

**Inspection Date** 

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

## 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 0.9 Acre-feet

Pond bottom elevation = 6394.0

100% Sediment Storage Volume = 0.08 acre-feet at Elevation 6395.1

60% sediment Storage Volume = 0.05 acre feet at Elevation = 6394.75

Existing Sediment Elevation = 6394.0 + /-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6395.75

Emergency Spillway Elevation = 6399.4

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting.

Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.



#### **Old Coarse Refuse Road Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

4/17/08

## CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

**YES** 

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

**YES** 

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**Pasture Sediment Pond** 

#### **GENERAL INFORMATION**

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Pasture Sediment Pond** 

Impoundment Number

009

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

#### **IMPOUNDMENT INSPECTION**

**Inspection Date** 

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

## 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 3.2 Acre-feet

Pond bottom elevation = 6484.5

100% Sediment Storage Volume = 0.42 acre-feet at Elevation 6486.2

60% sediment Storage Volume = 0.25 acre feet at Elevation = 6485.5

Existing Sediment Elevation = 6484.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6486.6

Emergency Spillway Elevation = 6490.6

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.



#### 3. Field Evaluation.

**Pasture Sediment Pond** 

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure were observed.

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.



#### **CERTIFIED REPORT** IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions? 3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date

Sunnyside Refuse and Slurry

Page 6 of 18

#### Coarse Refuse Toe Sediment Pond

#### **GENERAL INFORMATION**

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

New Coarse Refuse Toe Sediment Pond

Impoundment Number

012

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

#### **IMPOUNDMENT INSPECTION**

**Inspection Date** 

March 25, 2008

Inspected by

Rusty Netz

Reason for Inspection

First Quarter Inspection 2008

## 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.6 Acre-feet

Pond bottom elevation = 6176.0

100% Sediment Storage Volume = 0.07 acre-feet at Elevation 6177.8

60% sediment Storage Volume = 0.03 acre feet at Elevation = 6177.0

Existing Sediment Elevation = 6176 + -

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6178.2

Emergency Spillway Elevation = 6183.63

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.



#### Coarse Refuse Toe Sediment Pond

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Rusty at Date: 4/7/08

## CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

#### **GENERAL INFORMATION**

**Coal Pile Sediment Pond** 

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Coal Pile Sediment Pond** 

Impoundment Number

014

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

#### **IMPOUNDMENT INSPECTION**

**Inspection Date** 

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

## 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.5 Acre-feet

Pond bottom elevation = 6473.0

100% Sediment Storage Volume = 0.5 acre-feet at Elevation 6476.0

60% sediment Storage Volume = 0.3 acre feet at Elevation = 6474.7

Existing Sediment Elevation = 6473.0 + /-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6476.0

Secondary Dewatering Orifice = 6477.2

Primary Spillway Elevation = 6477.9

Emergency Spillway Elevation = 6479.0

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.



#### **Coal Pile Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

#### **CERTIFIED REPORT** IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

**YES** 

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or of affecting stability in accordance with the Utah R645 Coal Mining Rules.

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

#### **Borrow Area Sediment Pond**

#### GENERAL INFORMATION

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Borrow Area Sediment Pond** 

Impoundment Number

<u>016</u>

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

**Inspection Date** 

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

## 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 8.3 Acre-feet
Pond bottom elevation = 6510.0
100% Sediment Storage Volume = 2.3 acre-feet at Elevation 6514.3
60% sediment Storage Volume = 1.4 acre feet at Elevation = 6513.3

Existing Sediment Elevation = 6510 + -

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6514.3

Emergency Spillway Elevation = 6517.03

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it. N

No samples were taken

Sediment level was good. Pond did not require decanting.

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

#### **Borrow Area Sediment Pond**



#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Date: 4/7/08

#### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

<u>YES</u>

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

**YES** 

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### COMMENTS/ OTHER INFORMATION

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**GENERAL INFORMATION** 

Coarse Refuse Pile

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name

Coarse Refuse Pile

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-01

Inspection Date

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

N/A - Activities occurring at this time are associated with removal of refuse material

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality



#### Coarse Refuse Pile

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Refuse material is actively being excavated and removed from various locations across the top of the pile

The East Slurry Cell has been decommissioned and the coal refuse material stored therein has been incorporated as part of the Coarse Refuse Pile.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

nte: 14/1

#### **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C. P.E. Number & State: 187727 UTAH

**GENERAL INFORMATION** 

**Excess Spoil Disposal Area #1** 

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Excess Spoil Disposal Area #1

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-04

Inspection Date

March 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

First Quarter Inspection 2008

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

No new material was placed during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

#### **Excess Spoil Disposal Area #1**

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Kupty

Date: 4/17/

#### **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C. P.E. Number & State: 187727 UTAH

#### **GENERAL INFORMATION**

Excess Spoil Disposal Area #2

Report Date

April 9, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Excess Spoil Disposal Area #2

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-05

**Inspection Date** 

March 25, 2008

Inspected by

**Rusty Netz** 

**Reason for Inspection** 

First Quarter Inspection 2008

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

Existing disturbed site. No additional topsoil removal is required by the approved plan

2. Placement of underdrains and protective filter systems.

No under-drains or filters area required by the approved plan

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

Approximately 11,557 tons of material were placed in this disposal area during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

#### Excess Spoil Disposal Area #2

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Both Slurry Ponds 1 & 2 have now been filled. The Clear Water Pond has been included within this Disposal Area. SCA has completed an enlargement of the Pasture Pond and has decommissioned the Clear Water Pond and incorporated the area within this Disposal Area. They can also continue filling the disposal area to the height approved.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

#### CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

S. Scott Carlson, PE, Twin Peaks, P.C.

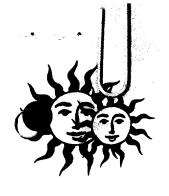
P.E. Number & State: 187727 UTAH



# APPENDIX A CERTIFIED REPORTS

## SECOND QUARTER INSPECTION

## IMPOUNDMENTS, REFUSE PILE AND DISPOSAL AREAS



## **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

July 25, 2008

Daron Haddock Utah Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

RE: Second Quarter 2008 Inspection Report Sunnyside Refuse Pile C/007/035

Dear Daron:

Please find enclosed a copy of the Second Quarter 2008 Inspection Report for Sunnyside Cogeneration Associates' impoundments, refuse pile and excess spoil areas.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blakey

Agent For

Sunnyside Cogeneration Associates

c.c. Steve Gross
 William Rossiter
 Paul Shepard
 Maggie Estrada
 Rusty Netz
 Plant File

**GENERAL INFORMATION** 

**Railcut Sediment Pond** 

Report Date

July 22, 2008

Permit Number Mine Name

C/007/035 Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

## IMPOUNDMENT IDENTIFICATION

Impoundment Name

**RailCut Sediment Pond** 

Impoundment Number

007

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

### **IMPOUNDMENT INSPECTION**

**Inspection Date** 

June 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

Second Quarter Inspection 2008

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 4.8 Acre-feet

Pond bottom elevation = 6206.0

100% Sediment Storage Volume = 0.34 acre-feet at Elevation 6209

60% sediment Storage Volume = 0.2 acre feet at Elevation = 6207.7

Existing Sediment Elevation = 6206.8 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6209.07

Emergency Spillway Elevation = 6212.34

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment levels were good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Rail Cut Sediment Pond**

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed No water was impounded

No other aspects of the impounding structure were observed that could affect its stability or functionality.

## **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Date: 7/24/08

# CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

**YES** 

## COMMENTS/ OTHER INFORMATION

None

## **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, are that we also so or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mintage Rase (ESS/O).

By: S. Scott Carlson, PE, Twin Peaks, P.E. Number & State: 187727 UTAH

# **Old Coarse Refuse Road Sediment Pond**

**GENERAL INFORMATION** 

Report Date

July 22, 2008

Permit Number
Mine Name

C/007/035 Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

IMPOUNDMENT IDENTIFICATION

Impoundment Name

Old Coarse Refuse Road Sediment Pond

Impoundment Number

<u>008</u>

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

<u>N/A</u>

IMPOUNDMENT INSPECTION

**Inspection Date** 

June 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

Second Quarter Inspection 2008

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 0.9 Acre-feet

Pond bottom elevation = 6394.0

100% Sediment Storage Volume = 0.08 acre-feet at Elevation 6395.1

60% sediment Storage Volume = 0.05 acre feet at Elevation = 6394.75

Existing Sediment Elevation = 6394.25 + /

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6395.75

Emergency Spillway Elevation = 6399.4

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting.

Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

### Old Coarse Refuse Road Sediment Pond

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

# **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

Signature:	Kusty	nety	Date:	7/24/0	R
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# CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

# **COMMENTS/ OTHER INFORMATION**

None

# **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that impostions and inspection reports are made by myself or under my direction and include any appearances of instability, structure that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design or under my direction and include any appearances of instability, structure that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design or under my direction and include any appearances of instability, structure that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design or under my direction and include any appearances of instability, structure that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design or under my direction and include any appearances of instability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

Pasture Sediment Pond

**GENERAL INFORMATION** 

Report Date

July 22, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

IMPOUNDMENT IDENTIFICATION

Impoundment Name

Pasture Sediment Pond

Impoundment Number

009

UPDES Permit Number

**UT024759** 

MSHA ID Number

N/A

IMPOUNDMENT INSPECTION

Inspection Date

June 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Second Quarter Inspection 2008** 

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 3.2 Acre-feet
Pond bottom elevation = 6484.5
100% Sediment Storage Volume = 0.42 acre-feet at Elevation 6486.2
60% sediment Storage Volume = 0.25 acre feet at Elevation = 6485.5
Existing Sediment Elevation = 6485 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6486.6 Emergency Spillway Elevation = 6490.6

## 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

**Pasture Sediment Pond** 

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure were observed.

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

## **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Date: 724/08

# CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

<u>YES</u>

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### COMMENTS/ OTHER INFORMATION

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and this precions and inspection reports are made by myself or under my direction and include any appearances of instability.

By: S. Scott Carlson, PE, Twin Peaks, P

P.E. Number & State: 187727 UTAH

#### Coarse Refuse Toe Sediment Pond

#### **GENERAL INFORMATION**

Report Date

July 22, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

New Coarse Refuse Toe Sediment Pond

Impoundment Number

012

UPDES Permit Number

UT024759

MSHA ID Number

N/A

#### **IMPOUNDMENT INSPECTION**

**Inspection Date** 

June 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Second Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.6 Acre-feet
Pond bottom elevation = 6176.0
100% Sediment Storage Volume = 0.07 acre-feet at Elevation 6177.8
60% sediment Storage Volume = 0.03 acre feet at Elevation = 6177.0
Existing Sediment Elevation = 6176.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6178.2 Emergency Spillway Elevation = 6183.63

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### Coarse Refuse Toe Sediment Pond

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

# **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

## CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

# COMMENTS/ OTHER INFORMATION

None

# **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural was affecting stability in accordance with the Utah R645 Coal Mining R s conditions of the structure

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**GENERAL INFORMATION** 

**Coal Pile Sediment Pond** 

Report Date

July 22, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

# IMPOUNDMENT IDENTIFICATION

Impoundment Name

Coal Pile Sediment Pond

Impoundment Number

014

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

## IMPOUNDMENT INSPECTION

Inspection Date

June 25, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Second Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.5 Acre-feet

Pond bottom elevation = 6473.0

100% Sediment Storage Volume = 0.5 acre-feet at Elevation 6476.0

60% sediment Storage Volume = 0.3 acre feet at Elevation = 6474.7

Existing Sediment Elevation  $\neq 6473.5$ 

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6476.0

Secondary Dewatering Orifice = 6477.2

Primary Spillway Elevation = 6477.9

Emergency Spillway Elevation = 6479.0

### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

### **Coal Pile Sediment Pond**

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

# **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

Signature:

## CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

# **COMMENTS/ OTHER INFORMATION**

None

# **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, standard weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining

S. Scott Carlson, PE, Twin Peaks, P.

P.E. Number & State: 187727 UTAH

#### **Borrow Area Sediment Pond**

### **GENERAL INFORMATION**

Report Date

July 22, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Borrow Area Sediment Pond** 

Impoundment Number

016

**UPDES Permit Number** 

<u>UT024759</u>

MSHA ID Number

N/A

## IMPOUNDMENT INSPECTION

**Inspection Date** 

June 25, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Second Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 8.3 Acre-feet
Pond bottom elevation = 6510.0
100% Sediment Storage Volume = 2.3 acre-feet at Elevation 6514.3
60% sediment Storage Volume = 1.4 acre feet at Elevation = 6513.3
Existing Sediment Elevation = 6511 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6514.3 Emergency Spillway Elevation = 6517.03

### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken

Sediment level was good. Pond did not require decanting.

Embankment conditions were good. Vegetation on outslopes was adequate.

### **Borrow Area Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

## **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

Signature:

Date:

# **CERTIFIED REPORT** IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

# COMMENTS/ OTHER INFORMATION

None

# **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, street, affecting stability in accordance with the Utah R645 Coal Mining or ther hazardous conditions of the structure

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**GENERAL INFORMATION** 

Coarse Refuse Pile

Report Date

July 22, 2008

Permit Number Mine Name

C/007/035

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Coarse Refuse Pile

Pile Number

<u>N/A</u>

MSHA ID Number

1211-UT-09-02093-01

Inspection Date

<u>June 25, 2008</u>

Inspected by

**Rusty Netz** 

Reason for Inspection

**Second Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

### Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

N/A - Activities occurring at this time are associated with removal of refuse material

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

#### Coarse Refuse Pile

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Refuse material is actively being excavated and removed from various locations across the top of the pile

The East Slurry Cell has been decommissioned and the coal refuse material stored therein has been incorporated as part of the Coarse Refuse Pile.

# **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

Signature:

CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**GENERAL INFORMATION** 

Excess Spoil Disposal Area #1

Report Date

July 22, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Excess Spoil Disposal Area #1

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-04

Inspection Date

June 25, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Second Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

No new material was placed during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

#### Excess Spoil Disposal Area #1

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

### **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks

P.E. Number & State: 187727 UTAH

#### **GENERAL INFORMATION**

Excess Spoil Disposal Area #2

Report Date

July 22, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

### **EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name

Excess Spoil Disposal Area #2

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-05

**Inspection Date** 

June 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Second Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

Existing disturbed site. No additional topsoil removal is required by the approved plan

2. Placement of underdrains and protective filter systems.

No under-drains or filters area required by the approved plan

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

Approximately 8,532 tons of material were placed in this disposal area during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

## Excess Spoil Disposal Area #2

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and meritain lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Both Slurry Ponds 1 & 2 have now been filled. The Clear Water Pond has been included within this Disposal Area. SCA has completed an enlargement of the Pasture Pond and has decommissioned the Clear Water Pond and incorporated the area within this Disposal Area. They can also continue filling the disposal area to the height approved.

# **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by stability.

Signature: Date: 72

# **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by structure affecting stability.

By: S. Scott Carlson, PE. Twin Peaks, P.C. P.E. Number & State: 187727 UTAH



# APPENDIX A CERTIFIED REPORTS

# THIRD QUARTER INSPECTION

# IMPOUNDMENTS, REFUSE PILE AND DISPOSAL AREAS



# **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

October 27, 2008

Daron Haddock Utah Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

RE: Third Quarter 2008 Inspection Report Sunnyside Refuse Pile C/007/035

Dear Daron:

Please find enclosed a copy of the Third Quarter 2008 Inspection Report for Sunnyside Cogeneration Associates' impoundments, refuse pile and excess spoil areas.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blakey

Agent For

Sunnyside Cogeneration Associates

c.c. Steve Gross
 William Rossiter
 Paul Shepard
 Maggie Estrada
 Rusty Netz
 Plant File

GENERAL INFORMATION

**Railcut Sediment Pond** 

Report Date

October 20, 2008

**Permit Number** 

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

**Sunnyside Cogeneration Associates** 

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

RailCut Sediment Pond

Impoundment Number

007

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

Inspection Date

September 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Third Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 4.8 Acre-feet
Pond bottom elevation = 6206.0
100% Sediment Storage Volume = 0.34 acre-feet at Elevation 6209
60% sediment Storage Volume = 0.2 acre feet at Elevation = 6207.7

Existing Sediment Elevation = 6206.8 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6209.07 Emergency Spillway Elevation = 6212.34

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment levels were good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Rail Cut Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed No water was impounded

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

\_Date

CERTIFIED REPORT

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: <u>187727 UTAH</u>

#### **Old Coarse Refuse Road Sediment Pond**

#### **GENERAL INFORMATION**

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Old Coarse Refuse Road Sediment Pond

Impoundment Number

800

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

**Inspection Date** 

September25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Third Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 0.9 Acre-feet
Pond bottom elevation = 6394.0
100% Sediment Storage Volume = 0.08 acre-feet at Elevation 6395.1
60% sediment Storage Volume = 0.05 acre feet at Elevation = 6394.75
Existing Sediment Elevation = 6394.25 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6395.75 Emergency Spillway Elevation = 6399.4

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it. No samples were taken Pond did not require decanting. Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate. Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

#### **Old Coarse Refuse Road Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

\_Date:

10/27/08

# CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### COMMENTS/ OTHER INFORMATION

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**Pasture Sediment Pond** 

#### **GENERAL INFORMATION**

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Pasture Sediment Pond

Impoundment Number

009

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

September25, 2008

Inspected by

**Rusty Netz** 

**Reason for Inspection** 

**Third Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

بو≉رُ

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 3.2 Acre-feet
Pond bottom elevation = 6484.5
100% Sediment Storage Volume = 0.42 acre-feet at Elevation 6486.2
60% sediment Storage Volume = 0.25 acre feet at Elevation = 6485.5
Existing Sediment Elevation = 6484.7 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6486.6 Emergency Spillway Elevation = 6490.6

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Pasture Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure were observed.

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

#### CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

## **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date

Sunnyside Refuse and Slurry

Page 6 of 18

#### **Coarse Refuse Toe Sediment Pond**

### **GENERAL INFORMATION**

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

New Coarse Refuse Toe Sediment Pond

Impoundment Number

012

**UPDES Permit Number** 

<u>UT024759</u>

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

**Inspection Date** 

September25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Third Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.6 Acre-feet
Pond bottom elevation = 6176.0
100% Sediment Storage Volume = 0.07 acre-feet at Elevation 6177.8
60% sediment Storage Volume = 0.03 acre feet at Elevation = 6177.0

Existing Sediment Elevation = 6176.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6178.2

Emergency Spillway Elevation = 6183.63

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Coarse Refuse Toe Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

### CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

COMMENTS/ OTHER INFORMATION

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness of the fraction of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

S. Scott Carlson, PE, Twin Peaks, P.C. By:

P.E. Number & State: 187727 UTAH

#### **GENERAL INFORMATION**

Coal Pile Sediment Pond

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Coal Pile Sediment Pond** 

Impoundment Number

014

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

September25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Third Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.5 Acre-feet

Pond bottom elevation = 6473.0

100% Sediment Storage Volume = 0.5 acre-feet at Elevation 6476.0

60% sediment Storage Volume = 0.3 acre feet at Elevation = 6474.7

Existing Sediment Elevation = 6473.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6476.0

Secondary Dewatering Orifice = 6477.2

Primary Spillway Elevation = 6477.9

Emergency Spillway Elevation = 6479.0

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Coal Pile Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Date: 10/27/08

# CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

<u>YES</u>

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: <u>187727 UTAH</u>

**Borrow Area Sediment Pond** 

#### **GENERAL INFORMATION**

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Borrow Area Sediment Pond** 

Impoundment Number

016

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

September 25, 2008

Inspected by

**Rusty Netz** 

**Reason for Inspection** 

**Third Quarter Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 8.3 Acre-feet
Pond bottom elevation = 6510.0
100% Sediment Storage Volume = 2.3 acre-feet at Elevation 6514.3
60% sediment Storage Volume = 1.4 acre feet at Elevation = 6513.3
Existing Sediment Elevation = 6511 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6514.3 Emergency Spillway Elevation = 6517.03

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken

Sediment level was good. Pond did not require decanting.

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Borrow Area Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

#### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

**Signature**:

Date: 10 3



If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

#### **GENERAL INFORMATION**

Coarse Refuse Pile

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

**Sunnyside Cogeneration Associates** 

#### **EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name

Coarse Refuse Pile

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-01

**Inspection Date** 

September 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Third Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

- 4. Placement and compaction of fill materials
  - N/A Activities occurring at this time are associated with removal of refuse material
- 5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

#### Coarse Refuse Pile

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Refuse material is actively being excavated and removed from various locations across the top of the pile

The East Slurry Cell has been decommissioned and the coal refuse material stored therein has been incorporated as part of the Coarse Refuse Pile.

#### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

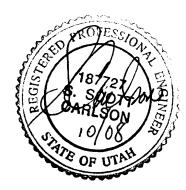
Signature:

CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: <u>187727 UTAH</u>



#### **GENERAL INFORMATION**

**Excess Spoil Disposal Area #1** 

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Excess Spoil Disposal Area #1

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-04

Inspection Date

September 25, 2008

Inspected by

**Rusty Netz** 

**Reason for Inspection** 

**Third Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

No new material was placed during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

#### Excess Spoil Disposal Area #1

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

#### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

#### CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH



#### **GENERAL INFORMATION**

Excess Spoil Disposal Area #2

Report Date

October 20, 2008

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### **EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name

Excess Spoil Disposal Area #2

Pile Number

<u>N/A</u>

MSHA ID Number

1211-UT-09-02093-05

**Inspection Date** 

September 25, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Third Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

Existing disturbed site. No additional topsoil removal is required by the approved plan

2. Placement of underdrains and protective filter systems.

No under-drains or filters area required by the approved plan

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

Approximately 7,583 tons of material were placed in this disposal area during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

### Excess Spoil Disposal Area #2

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Both Slurry Ponds 1 & 2 have now been filled. The Clear Water Pond has been included within this Disposal Area. SCA has completed an enlargement of the Pasture Pond and has decommissioned the Clear Water Pond and incorporated the area within this Disposal Area. They can also continue filling the disposal area to the height approved.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

#### **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C. P.E. Number & State: 187727 UTAH





# APPENDIX A CERTIFIED REPORTS

# FOURTH QUARTER INSPECTION

# IMPOUNDMENTS, REFUSE PILE AND DISPOSAL AREAS



# **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

January 27, 2009

Daron Haddock Utah Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

RE: Fourth Quarter 2008 Inspection Report Sunnyside Refuse Pile C/007/035

Dear Daron:

Please find enclosed a copy of the Fourth Quarter 2008 Inspection Report for Sunnyside Cogeneration Associates' impoundments, refuse pile and excess spoil areas.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blakey

Agent For

Sunnyside Cogeneration Associates

c.c. Steve Gross
 Paul Shepard
 Maggie Estrada
 Rusty Netz
 Plant File

### **GENERAL INFORMATION**

**Railcut Sediment Pond** 

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

**Sunnyside Cogeneration Associates** 

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**RailCut Sediment Pond** 

Impoundment Number

007

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

Inspection Date

December 15, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

Fourth Quarter Inspection 2008

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 4.8 Acre-feet
Pond bottom elevation = 6206.0
100% Sediment Storage Volume = 0.34 acre-feet at Elevation 6209
60% sediment Storage Volume = 0.2 acre feet at Elevation = 6207.7
Existing Sediment Elevation = 6206.8 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6209.07 Emergency Spillway Elevation = 6212.34

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment levels were good

Embankment conditions were good. Vegetation on outslopes was adequate.

### Rail Cut Sediment Pond

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed No water was impounded

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

Date:

### CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

YES

YES

### COMMENTS/ OTHER INFORMATION

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rule

PROFESSION

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

#### Old Coarse Refuse Road Sediment Pond

### **GENERAL INFORMATION**

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Old Coarse Refuse Road Sediment Pond

Impoundment Number

800

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

**December 15, 2008** 

Inspected by

Rusty Netz

Reason for Inspection

Fourth Quarter Inspection 2008

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 0.9 Acre-feet
Pond bottom elevation = 6394.0
100% Sediment Storage Volume = 0.08 acre-feet at Elevation 6395.1
60% sediment Storage Volume = 0.05 acre feet at Elevation = 6394.75
Existing Sediment Elevation = 6394.25 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6395.75 Emergency Spillway Elevation = 6399.4

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it. No samples were

No samples were taken Pond did not require decanting.

Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

### **Old Coarse Refuse Road Sediment Pond**

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

### **CERTIFIED REPORT**

### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### COMMENTS/ OTHER INFORMATION

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

**Pasture Sediment Pond** 

### **GENERAL INFORMATION**

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Pasture Sediment Pond

Impoundment Number

009

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

### **IMPOUNDMENT INSPECTION**

**Inspection Date** 

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

Fourth Quarter Inspection 2008

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 3.2 Acre-feet

Pond bottom elevation = 6484.5

100% Sediment Storage Volume = 0.42 acre-feet at Elevation 6486.2

60% sediment Storage Volume = 0.25 acre feet at Elevation = 6485.5

Existing Sediment Elevation = 6484.7 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6486.6

Emergency Spillway Elevation = 6490.6

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

### Pasture Sediment Pond

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure were observed.

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

### **CERTIFIED REPORT**

#### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### COMMENTS/ OTHER INFORMATION

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure OFESSION, affecting stability in accordance with the Utah R645 Coal Mining RG

S. Scott Carlson, PE, Twin Peaks, P. Bv:

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date

Sunnyside Refuse and Slurry

Page 6 of 18

### **Coarse Refuse Toe Sediment Pond**

### **GENERAL INFORMATION**

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

New Coarse Refuse Toe Sediment Pond

Impoundment Number

012

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

December 15, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

Fourth Quarter Inspection 2008

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.6 Acre-feet

Pond bottom elevation = 6176.0

100% Sediment Storage Volume = 0.07 acre-feet at Elevation 6177.8

60% sediment Storage Volume = 0.03 acre feet at Elevation = 6177.0

Existing Sediment Elevation = 6176.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6178.2

Emergency Spillway Elevation = 6183.63

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### Coarse Refuse Toe Sediment Pond

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

### CERTIFIED REPORT

### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### COMMENTS/ OTHER INFORMATION

None

### CERTIFICATION STATEMENT:

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rule

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

### **GENERAL INFORMATION**

**Coal Pile Sediment Pond** 

Report Date

January 20, 2009

**Permit Number** 

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

#### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Coal Pile Sediment Pond** 

Impoundment Number

014

**UPDES Permit Number** 

**UT024759** 

MSHA ID Number

N/A

#### IMPOUNDMENT INSPECTION

**Inspection Date** 

December 15, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

Fourth Quarter Inspection 2008

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.5 Acre-feet

Pond bottom elevation = 6473.0

100% Sediment Storage Volume = 0.5 acre-feet at Elevation 6476.0

60% sediment Storage Volume = 0.3 acre feet at Elevation = 6474.7

Existing Sediment Elevation = 6473.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6476.0

Secondary Dewatering Orifice = 6477.2

Primary Spillway Elevation = 6477.9

Emergency Spillway Elevation = 6479.0

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting.' Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

### **Coal Pile Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **OUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date

### **CERTIFIED REPORT**

### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

ILO

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

<u>YES</u>

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### COMMENTS/ OTHER INFORMATION

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Pater Service.

By: S. Scott Carlson, PE, Twin Peaks, P.(

P.E. Number & State: 187727 UTAH

### **Borrow Area Sediment Pond**

### **GENERAL INFORMATION**

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Borrow Area Sediment Pond** 

Impoundment Number

016

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

December 15, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

Fourth Quarter Inspection 2008

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 8.3 Acre-feet

Pond bottom elevation = 6510.0

100% Sediment Storage Volume = 2.3 acre-feet at Elevation 6514.3

60% sediment Storage Volume = 1.4 acre feet at Elevation = 6513.3

Existing Sediment Elevation = 6511 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6514.3

Emergency Spillway Elevation = 6517.03

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken

Sediment level was good. Pond did not require decanting.

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Borrow Area Sediment Pond**

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

### **CERTIFIED REPORT**

### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

<u>YES</u>

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

**YES** 

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/ OTHER INFORMATION**

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weekness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Russian PESSION.

By: S. Scott Carlson, PE, Twin Peaks, P.C

P.E. Number & State: <u>187727 UTAH</u>

### **GENERAL INFORMATION**

Coarse Refuse Pile

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Coarse Refuse Pile

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-01

Inspection Date

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Fourth Quarter Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

N/A - Activities occurring at this time are associated with removal of refuse material

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

### Coarse Refuse Pile

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Refuse material is actively being excavated and removed from various locations across the top of the pile

The East Slurry Cell has been decommissioned and the coal refuse material stored therein has been incorporated as part of the Coarse Refuse Pile.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Date:

Signature:

**CERTIFICATION STATEMENT** 

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

### **GENERAL INFORMATION**

Excess Spoil Disposal Area #1

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### **EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name

Excess Spoil Disposal Area #1

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-04

**Inspection Date** 

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

Fourth Quarter Inspection 2008

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

No new material was placed during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

Excess Spoil Disposal Area #1

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date:

### **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.

P.E. Number & State: <u>187727 UTAH</u>

### **GENERAL INFORMATION**

Excess Spoil Disposal Area #2

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### **EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name

Excess Spoil Disposal Area #2

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-05

Inspection Date

<u>December 15, 2008</u>

Inspected by

Rusty Netz

Reason for Inspection

Fourth Quarter Inspection 2008

Attachment to Report? (such as refuse sample analysis or photos)

NO

#### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

Existing disturbed site. No additional topsoil removal is required by the approved plan

2. Placement of underdrains and protective filter systems.

No under-drains or filters area required by the approved plan

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

Approximately 7,767 tons of material were placed in this disposal area during the quarter.

5. Final grading and revegetation of fill.

N/A

Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

### Excess Spoil Disposal Area #2

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Both Slurry Ponds 1 & 2 have now been filled. The Clear Water Pond has been included within this Disposal Area. SCA has completed an enlargement of the Pasture Pond and has decommissioned the Clear Water Pond and incorporated the area within this Disposal Area. They can also continue filling the disposal area to the height approved.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH



# APPENDIX A CERTIFIED REPORTS

### **ANNUAL INSPECTION**

## IMPOUNDMENTS, REFUSE PILE AND DISPOSAL AREAS



# **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

January 27, 2009

Daron Haddock Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

RE: Annual 2008 Inspection Report Sunnyside Refuse and Slurry C/007/035

Dear Mr. Haddock:

Please find enclosed a copy of the Annual 2008 Inspection Report for the Sunnyside refuse pile, impoundments, and excess spoil areas.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blake

Agent For

Sunnyside Cogeneration Associates

C.C. Steve Gross
Paul Shepard
Maggie Estrada
Rusty Netz
Plant File

**GENERAL INFORMATION** 

**Railcut Sediment Pond** 

Report Date

**January 20, 2009** 

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

RailCut Sediment Pond

Impoundment Number

007

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### **IMPOUNDMENT INSPECTION**

Inspection Date

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Annual Inspection 2008** 

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 4.8 Acre-feet

Pond bottom elevation = 6206.0

100% Sediment Storage Volume = 0.34 acre-feet at Elevation 6209

60% sediment Storage Volume = 0.2 acre feet at Elevation = 6207.7

Existing Sediment Elevation = 6206.8 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6209.07

Emergency Spillway Elevation = 6212.34

### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment levels were good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Rail Cut Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or shurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

Date

127/09

### **CERTIFIED REPORT**

#### IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

<u>YES</u>

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

#### **COMMENTS/OTHER INFORMATION**

None

#### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural activities other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Ruje OFESSION

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

### Old Coarse Refuse Road Sediment Pond

### **GENERAL INFORMATION**

Report Date

January 20, 2009

**Permit Number** 

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Old Coarse Refuse Road Sediment Pond

Impoundment Number

008

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

Inspection Date

December 15, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Annual Inspection 2008** 

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 0.9 Acre-feet
Pond bottom elevation = 6394.0
100% Sediment Storage Volume = 0.08 acre-feet at Elevation 6395.1
60% sediment Storage Volume = 0.05 acre feet at Elevation = 6394.75
Existing Sediment Elevation = 6394.25 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6395.75 Emergency Spillway Elevation = 6399.4

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it. No samples were taken Pond did not require decanting. Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

#### Old Coarse Refuse Road Sediment Pond

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

### **CERTIFIED REPORT** IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### COMMENTS OTHER INFORMATION

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structure Directing stability in accordance with the Utah R645 Coal Mining Rates affecting stability in accordance with the Utah R645 Coal Mining Refer

S. Scott Carlson, PE, Twin Peaks, P.C. By:

P.E. Number & State: 187727 UTAH

**Pasture Sediment Pond** 

**GENERAL INFORMATION** 

Report Date <u>January 20, 2009</u>

Permit Number C/007/035

Mine Name Sunnyside Refuse and Slurry

Company Name <u>Sunnyside Cogeneration Associates</u>

IMPOUNDMENT IDENTIFICATION

Impoundment Name Pasture Sediment Pond

Impoundment Number 009

UPDES Permit Number UT024759

MSHA ID Number N/A

IMPOUNDMENT INSPECTION

Inspection Date <u>December 15, 2008</u>

Inspected by Rusty Netz

Reason for Inspection Annual Inspection 2008

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 3.2 Acre-feet
Pond bottom elevation = 6484.5
100% Sediment Storage Volume = 0.42 acre-feet at Elevation 6486.2
60% sediment Storage Volume = 0.25 acre feet at Elevation = 6485.5
Existing Sediment Elevation = 6484.7 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6486.6 Emergency Spillway Elevation = 6490.6

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

#### **Pasture Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or shurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure were observed.

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

### CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### COMMENTS/ OTHER INFORMATION

None

### CERTIFICATION STATEMENT:

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and this inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structure weakness of other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Mile

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 []

### **Coarse Refuse Toe Sediment Pond**

### **GENERAL INFORMATION**

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

New Coarse Refuse Toe Sediment Pond

Impoundment Number

012

**UPDES Permit Number** 

<u>UT024759</u>

MSHA ID Number

<u> N/A</u>

### **IMPOUNDMENT INSPECTION**

Inspection Date

December 15, 2008

Inspected by

**Rusty Netz** 

**Reason for Inspection** 

**Annual Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.6 Acre-feet

Pond bottom elevation = 6176.0

100% Sediment Storage Volume = 0.07 acre-feet at Elevation 6177.8

60% sediment Storage Volume = 0.03 acre feet at Elevation = 6177.0

Existing Sediment Elevation = 6176.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6178.2

Emergency Spillway Elevation = 6183.63

#### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken Pond did not require decanting

Sediment level was good

Embankment conditions were good. Vegetation on outslopes was adequate.

#### Coarse Refuse Toe Sediment Pond

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or shurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

### **CERTIFIED REPORT**

IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

**YES** 

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

### COMMENTS/ OTHER INFORMATION

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and the fine retions and inspection reports are made by myself or under my direction and include any appearances of instability, statistical Ocal Statistics of the structure affecting stability in accordance with the Utah R645 Coal Mining Rulls. affecting stability in accordance with the Utah R645 Coal Mining

S. Scott Carlson, PE, Twin Peaks, P.C. By:

P.E. Number & State: 187727 UTAH

#### **GENERAL INFORMATION**

**Coal Pile Sediment Pond** 

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

**Company Name** 

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

Coal Pile Sediment Pond

Impoundment Number

014

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### **IMPOUNDMENT INSPECTION**

Inspection Date

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Annual Inspection 2008** 

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.5 Acre-feet

Pond bottom elevation = 6473.0

100% Sediment Storage Volume = 0.5 acre-feet at Elevation 6476.0

60% sediment Storage Volume = 0.3 acre feet at Elevation = 6474.7

Existing Sediment Elevation = 6473.5 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6476.0

Secondary Dewatering Orifice = 6477.2

Primary Spillway Elevation = 6477.9

Emergency Spillway Elevation = 6479.0

### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had some water in it. No samples were taken Pond did not require decanting. Sediment level was good.

Embankment conditions were good. Vegetation on outslopes was adequate.

#### **Coal Pile Sediment Pond**

#### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or shurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Nusty Note: 12709

# CERTIFIED REPORT IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

<u>YES</u>

3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

### **COMMENTS/ OTHER INFORMATION**

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural meathness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rates 20FESS/OA.

By: S. Scott Carlson, PE, Twin Peaks, P.C

P.E. Number & State: 187727 UTAH

### **Borrow Area Sediment Pond**

### **GENERAL INFORMATION**

Report Date

January 20, 2009

**Permit Number** 

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name

**Borrow Area Sediment Pond** 

Impoundment Number

016

**UPDES Permit Number** 

UT024759

MSHA ID Number

N/A

### IMPOUNDMENT INSPECTION

**Inspection Date** 

December 15, 2008

Inspected by

**Rusty Netz** 

Reason for Inspection

**Annual Inspection 2008** 

# 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 8.3 Acre-feet

Pond bottom elevation = 6510.0

100% Sediment Storage Volume = 2.3 acre-feet at Elevation 6514.3

60% sediment Storage Volume = 1.4 acre feet at Elevation = 6513.3

Existing Sediment Elevation = 6511 +/-

b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6514.3

Emergency Spillway Elevation = 6517.03

### 2. Field Information

Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Pond had no water in it.

No samples were taken

Sediment level was good. Pond did not require decanting.

Embankment conditions were good. Vegetation on outslopes was adequate.

### **Borrow Area Sediment Pond**

### 3. Field Evaluation.

Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting

Signature:	Klu	tu	Les	Date:	1	27	09
		4	7				

### **CERTIFIED REPORT** IMPOUNDMENT EVALUATION

If you answer NO to these questions, please explain under comments

1. Is impoundment designed and constructed in accordance with the approved plan?

YES

2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?

YES

3. Has the impoundment met all applicable performance standards and effluent limitations

from the previous date of inspection?

YES

### **COMMENTS/ OTHER INFORMATION**

None

### **CERTIFICATION STATEMENT:**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural strategies or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Russian OFESSION

S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

### GENERAL INFORMATION

Coarse Refuse Pile

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Coarse Refuse Pile

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-01

Inspection Date

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Annual Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

N/A - Activities occurring at this time are associated with removal of refuse material

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

### Coarse Refuse Pile

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Refuse material is actively being excavated and removed from various locations across the top of the pile

The East Slurry Cell has been decommissioned and the coal refuse material stored therein has been incorporated as part of the Coarse Refuse Pile.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability directival weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.O.

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date

### **GENERAL INFORMATION**

Excess Spoil Disposal Area #1

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION** 

Pile Name

Excess Spoil Disposal Area #1

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-04

**Inspection Date** 

December 15, 2008

Inspected by

Rusty Netz

Reason for Inspection

**Annual Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

No new material was placed during the Year.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

Excess Spoil Disposal Area #1

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

### **QUALIFICATION STATEMENT:**

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature:

CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structure weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, I

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date

### **GENERAL INFORMATION**

Excess Spoil Disposal Area #2

Report Date

January 20, 2009

Permit Number

C/007/035

Mine Name

Sunnyside Refuse and Slurry

Company Name

Sunnyside Cogeneration Associates

### **EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name

Excess Spoil Disposal Area #2

Pile Number

N/A

MSHA ID Number

1211-UT-09-02093-05

Inspection Date

<u>December 15, 2008</u>

Inspected by

Rusty Netz

Reason for Inspection

**Annual Inspection 2008** 

Attachment to Report? (such as refuse sample analysis or photos)

NO

### **Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

Existing disturbed site. No additional topsoil removal is required by the approved plan

2. Placement of underdrains and protective filter systems.

No under-drains or filters area required by the approved plan

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

Approximately 35,439 tons (11557 Q1, 8532 Q2, 7583 Q3, 7767 Q4) of material were placed in this disposal area during the Year.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

### Excess Spoil Disposal Area #2

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Both Slurry Ponds 1 & 2 have now been filled. The Clear Water Pond has been included within this Disposal Area. SCA has completed an enlargement of the Pasture Pond and has decommissioned the Clear Water Pond and incorporated the area within this Disposal Area. They can also continue filling the disposal area to the height approved.

### **QUALIFICATION STATEMENT:**

I hereby certify that, I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Rusty Net Date: 127/09

### **CERTIFICATION STATEMENT**

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: <u>187727 UTAH</u>

Affix Signature, Stamp and Date



### APPENDIX B-1 CLIMATOLOGICAL DATA

## SUNNYSIDE WEATHER STATION 2008 CLIMATOLOGICAL REPORT

	_	July			August		S	September	3.		October			November	Ð.		December	
day	max temp	Ē	precip	max temp	Ē	precip	max temp	min temp	precip	max temp	min temp	precip	max temp	min temp	precip	max temp	min temp	precip
•	68	62		98	2		69	999	0.5	88	55		2	46		28	32	
2	88	99		98	69		68	43		8	53		55	37	0.63	55	35	
က	91	2		9	- 67		9/	47		22	56		55	37		25	31	
4	9	8		92	98		9/	49		71	46	1.1	55	42		46	တ္တ	
9	9	65		ည	67	0.5	78	22		29	43		4	31		45	27	
9	88	28	0.05	88	8	0.46	78	51	0.3	62	<del>수</del>		45	25		49	တ္တ	
7	98	28		72	ၽ		80	52		63	42		46	53		49	32	
œ	88	29		79	29		82	22	0.1	88	45		53	99		43	31	
6	8	63		82	28	0.3	ဆ	57	0.05	69	45		25	38		41	27	
9	9	23		83	28	0.23	2	22	4	71	41		52	35		4	28	
-1	8	62		85	22		71	49	0.3	2	47		51	32		48	34	
12	8	61		87	54		29	42	0.1	2	53		55	8		48	32	
13	8	61		88	61		74	46		51	စ္က		28	39		43	8	
4	8	8		98	61		78	53		28	33		22	8		9	18	
15	68	92		98	62		62	53		61	4		2	33		31	19	
16	8	8		29	22		79	53		65	42		26	æ		31	23	0.2
17	83	63		78	25		79	55		88	45		61	4		32	20	
18	87	8		82	26		77	54		89	42		61	43		32	25	
19	92	62		88	9		78	53		89	45		8	4		33	23	0.25
20	83	29		98	09		79	22	0.25	89	46	0.1	29	4		श्र	23	
21	92	8		87	88		75	49		90	43		20	8		33	21	0.13
22	82	ည		88	61		72	8		26	31		51	8		35	25	4.0
23	88	82		8	2		2	<b>4</b> 3		53	33		2	8		31	20	0.35
24	9	2		ည	2		8	25		62	68		\$	33		31	16	
25	9	92	0.1	යි	62		8	25		67	41		52	8		30	24	
<b>56</b>	8	8		88	28		81	55		70	46		51	8		35	23	0.65
27	8	61		87	20		82	22		69	4		46	36		26	11	
28	88	8		88	26		81	28	0.17	89	94		84	36		29	19	
29	91	61		88	61		79	\$		20	94		2	32		32	21	
30	85	85		87	20		8	72		69	48		57	88		38	22	
- 1.	35	ည		\$	28					65	48					37	23	
lotai	2772	1940	0.15	2680	1873	1.19	2304	1555	1.77	2035	1330	1.2	1610	1068	0.63	1209	772	1.98
AVG	89.42	62.58		86.45	60.42		76.80	51.83		65.65	42.90		53.67	35.60		39.00	24.90	
AVG DAILY	76.00	8		73.44	4		2	32		4	27		4	44.63		31	31.95	

60.52	38.67	12.53	<u>5</u>
AVERAGE HIGH TEMPERATURE	AVERAGE LOW TEMPERATURE	<b>TOTAL PRECIPITATION FOR 2008</b>	<b>AVERAGE MONTHLY PRECIPITATION</b>

### SUNNYSIDE WEATHER STATION 2008 CLIMATOLOGICAL REPORT

		January			February			March			April			May			June	
day	max temp	max temp min temp	precip	max temp min temp	min temp	precip	max temp	min temp	precip	max temp	=	precip	max temp	Ε	precip	max temp	min temp	precip
1				27	14		20	28					52	29	<u>I</u>	78	51	
2				27	11	0.38	45	17		55.2	4.4		58	53		8	51	
3				27	12	0.52	\$	13		52	53		57	35		79	52	
4	အ	21		30	10		36	19		52	က	0.18	99	4		71	49	9.0
ĸ	ဇ္ဌ	72		<b>78</b>	5		32	13		<b>3</b> 2	37		71	46		61	39	
9	35	23		27	6		37	13		55	8		74	47		2	42	
7	59	13		26	10		42	19		29	35	0.35	72	46		74	20	
<b>&amp;</b>	59	10		32	12		43	28		20	29		72	46		65	69	
6	53	8	0.2	<b>4</b>	21		45	28		51	36		62	6		02	41	
9	82	9		9	24		46	56		46	32		62	35		83	49	
11	33	13		42	24		46	25		48	59		69	4		83	46	
12	8	13		<b>£</b>	21		46			53	53		71	46		8	9	
13	ဗ္ဂ	17		<b>4</b>	22		Machine broken	broken		62	ဆ		22	37		71	43	
14	8	4		35	19	0.65				99	4		2	8		82	49	
15	တ္တ	16		36	18					2	26		62	4	#	88	55	
16	78	4.0		6	18					20	႙		73	43		87	22	
17	17	တု		జ္တ	4	,				53	28		8	49		88	8	
42	23	2		အ	15					61	35		83	52		88	29	
19	<b>2</b> 8	တ		39	9					29	47		85	56		87	29	
20	24	တ		ႜႜႜ	24					89	47		82	55		83	56	
21	႙	16		ဓင္တ	22					22	33		<u>&amp;</u>	46		98	62	
22	31	4		37	27					62	ဆွ		20	36	0.65	87	62	
23	34	4		43	24					63	44		52	37	0.5	88	65	
24	58	16		42	က					8	41		52	36		82	57	
25	88	12		41	22					23	59		90	42	9.0	87	8	
26	33	16		41	22					28	35		62	46	0.2	87	57	
27	32	18	0.26	42	23					29	8		92	40		88	28	
28	33	22		64	78					88	ස		69	47		88	61	
29	24	4		84	88					22	45		20	44		88	88	
30	23	4	0.52							72	51		20	45		68	61	
31	22	2											75	53				
Total	821	344.4	96.0	1073	548	1.55	202	229	0.00		1062.1	0.53	2083	1328	1.95	2423	1628	9.0
AVG	29.32	12.30		37.00	18.90		42.08	20.82		58.94	36.62		67.19	42.84		80.77	54.27	
<b>AVG DAILY</b>	20.81	81		27.95	95		31.45	45		47.78	28		55.02	02		67.52	52	
																	3	

temperature in °F precipitation in inches



### APPENDIX B-2 DISPOSAL AREA #2 SOILS TEST RESULTS



Analytical Report

May 05, 2008

Report to:

Elona Hayward American West Analytical Labs 463 West 3600 South Salt Lake City, UT 84115

cc: Rebekah Winkler

Project ID: 83337/SCA ACZ Project ID: L68835

Elona Hayward:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 23, 2008. This project has been assigned to ACZ's project number, L68835. Please reference this number in all future inquiries.

Bill to:

**Beth Henderson** 

463 West 3600 South

Salt Lake City, UT 84115

**American West Analytical Labs** 

All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L68835. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after June 05, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Tony Antalek has reviewed and approved this report.







Inorganic Analytical Results

**American West Analytical Labs** 

Project ID:

83337/SCA

Sample ID:

SPOILS #2 EAST

ACZ Sample ID: L68835-01

Date Sampled: 02/01/08 12:00

Date Received:

04/23/08

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Result	Qual XC	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	33		t CaCO3/Kt	1	5	05/03/08 11:30	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	31		t CaCO3/Kt	1	5	05/03/08 11:30	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	-2		t CaCO3/Kt	1	5	05/03/08 11:30	calc
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.1	·	%	0.1	0.5	04/30/08 9:12	lwt
Solids, Percent	CLPSOW390, PART F, D-98	96.4	*	%	0.1	0.5	04/25/08 8:57	mjc/lwt
Sulfur Forms	M600/2-78-054 3.2.4		-			0.0		,
Sulfur Organic Residual		0.43	*	%	0.01	0.1	04/30/08 0:00	bji
Sulfur Pyritic Sulfide		0.27	•	%	0.01	0.1	04/30/08 0:00	bjl
Sulfur Sulfate		0.37		%	0.01	0.1	04/30/08 0:00	bji
Sulfur Total		1.07	•	%	0.01	0.1	04/30/08 0:00	bji
Total Sulfur minus Sulfate		0.70	•	%	0.01	0.1	04/30/08 0:00	bji

Soil Preparation

Parameter	EPA Method	Result	Qual	ΧQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/24/08 10:52	mjc/lwt
Crush and Pulverize	USDA No. 1, 1972							04/29/08 9:00	mjc



L68835: Page 2 of 9



### Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

### Inorganic Analytical Results

**American West Analytical Labs** 

Project ID:

83337/SCA

Sample ID:

SPOILS #2 WEST

ACZ Sample ID: L68835-02

Date Sampled: 02/01/08 12:00 '

Date Received: 04/23/08

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	30			t CaCO3/Kt	1	5	05/03/08 11:30	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	31			t CaCO3/Kt	1	. 5	05/03/08 11:30	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	1			t CaCO3/Kt	1	5	05/03/08 11:30	calc
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.1		*	<b>%</b>	0.1	0.5	04/30/08 1.1:25	iwt
Solids, Percent	CLPSOW390, PART F, D-98	96.1		*	%	0.1	0.5	04/25/08 9:00	mjc/lwt
Sulfur Forms	M600/2-78-054 3.2.4				,,		0.0	-	ingoniet
Sulfur Organic Residual		0.42		•	%	0.01	0.1	04/30/08 0:00	bjl
Sulfur Pyritic Sulfide		0.24		*	%	0.01	0.1	04/30/08 0:00	bji
Sulfur Sulfate		0.30		•	%	0.01	0.1	04/30/08 0:00	bji
Sulfur Total		0.96		*	%	0.01	0.1	04/30/08 0:00	•
Total Sulfur minus		0.66			%	0.01			bji
Sulfate		0.00			70	0.01	0.1	04/30/08 0:00	. bjl



Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/24/08 11:00	mjc/lwt
Crush and Pulverize	USDA No. 1, 1972							04/29/08 9:10	mic



L68835: Page 3 of 9

ì

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

### Report Header Explanations

Batch A distinct set of samples analyzed at a specific time

Found Value of the QC Type of interest Limit Upper limit for RPD, in %.

Lower Recovery Limit, in % (except for LCSS, mg/Kg)

MDL Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.

PCN/SCN A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis

PQL Practical Quantitation Limit, typically 5 times the MDL.

QC True Value of the Control Sample or the amount added to the Spike

Rec Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)

RPD Relative Percent Difference, calculation used for Duplicate QC Types

Upper Upper Recovery Limit, In % (except for LCSS, mg/Kg)

Sample Value of the Sample of interest

### QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	POV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

### QC Sample Type Explanations

**Control Samples** 

Blanks

Verifies that there is no or minimal contamination in the prep method or calibration procedure.

Verifies the accuracy of the method, including the prep procedure.

Duplicates Verifies the precision of the instrument and/or method.

Spikes/Fortified Matrix Determines sample matrix interferences, if any.

Standard Verifies the validity of the calibration.

### ACZ Qualifiers (Qual)

B Analyte concentration detected at a value between MDL and PQL.

H Analysis exceeded method hold time. pH is a field test with an immediate hold time.

U Analyte was analyzed for but not detected at the indicated MDL

### Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.

(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

(5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.

(6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

### Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(2) Soil, Siudge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.

(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

REPIN03.02.07.01

L68835: Page 4 of 9

(800) 334-5493

### Inorganic Extended **Qualifier Report**

### American West Analytical Labs

ACZ Project ID: L68835

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L68835-01	WG243613	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	,
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	•
		Sulfur Total	M600/2-78-054 3.2.4	RA	· · · · · · · · · · · · · · · · · · ·
2		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low fo accurate evaluation (< 10x MDL).
8835-02	WG243613	Sulfur Organic Residual	M600/2-78-054 3.2.4		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low fo accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low fo accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	•	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Certification Qualifiers

American West Analytical Labs

ACZ Project ID: L68835

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Neutralization Potential as CaCO3

M600/2-78-054 3.2.3

Solids, Percent

CLPSOW390, PART F, D-98

Sulfur Forms

M600/2-78-054 3.2.4



REPAD.05.06.05.01

L68835: Page 6 of 9



### Sample Receipt

American West Analytical Labs

83337/SCA

**ACZ Project ID:** 

L68835

**Date Received:** 

4/23/2008

Received By:

gac

**Date Printed:** 

4/24/2008

Rec	:eipt	Veri	fica	ti	O	n

- 1) Does this project require special handling procedures such as CLP protocol?
- 2) Are the custody seals on the cooler intact?
- 3) Are the custody seals on the sample containers intact?
- 4) Is there a Chain of Custody or other directive shipping papers present?
- 5) Is the Chain of Custody complete?
- 6) Is the Chain of Custody in agreement with the samples received?
- 7) Is there enough sample for all requested analyses?
- 8) Are all samples within holding times for requested analyses?
- 9) Were all sample containers received intact?
- 10) Are the temperature blanks present?
- 11) Are the trip blanks (VOA and/or Cyanide) present?
- 12) Are samples requiring no headspace, headspace free?
- 13) Do the samples that require a Foreign Soils Permit have one?

YES	NO	NA
		Х
X		
		Х
X		
Х		
Х		
Х		
Х		
Х		
		X
		Х
		Х
		Х

Exceptions: If you answered no to any of the above questions, please describe

N/A

### Contact (For any discrepancies, the client must be contacted)

N/A

### **Shipping Containers**

remp (°C)	Rad (µR/hr)
2.6	15

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

**Notes** 



REPAD.03.11.00.01

L68835: Page 7 of 9



Sample Receipt

**American West Analytical Labs** 

83337/SCA

ACZ Project ID: Date Received:

L68835

ate Received:

4/23/2008

Received By:

Sample	Container	Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	0<2	T >12	N/A	RAD	ID
L68835-01	SPOILS #2 EAST									Х		
L68835-02	SPOILS #2 WEST									Х		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
В	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
0	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
<b>T</b> .	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	p
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

<sup>\*</sup> pH check performed by analyst prior to sample preparation

(42)

Sample IDs Reviewed By: gac

American West Analytical Laboratories

Client: American West Analytical Laboratories 463 W. 3600 S.

Address:

Salt Lake City, UT 84115 **4**28

83337

P0#:

Project Name:

Contact: Phone:

Chain of Custody

Elona Hayward

rebekah@awal-labs.com elona@awal-labs.com (801) 263-8687 Fax: Email:

(801) 263-8686

QC Level:

Page 1 of 1

Turn Around Time Standard

Comments

Please contact Rebekah Winkler at AWAL with questions (888) 263-8686. Samples sent to AZC Labs. Appropriate Utah state certifications required. Acid Base Accounting ĸ xirisM olqmac Containera 12:00 Time 12:00 Date Sampled 2/1/2008 2/1/2008 Spoils #2 West Spoils #2 East Sample ID:

Special Instructions: Include project name and PO# on final report and Invoke. Email results to both Elona and Rebekah. oceived by: Sigmai aceived by: Signa Print Name Date: 4-22-68 Print Name

Print Name

### **Chemtech-Ford Laboratories**

Serving the Intermountain West since 1953



Date: 04/21/08

American West Analytical Labs attn: Elona Hayward 463 West 3600 South Salt Lake City, UT 84115

This is the final report for project: 89977

Individual pages or sections of this report may not be separated when using the information for regulatory compliance.

The analyses presented on this report were performed in accordance with National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

Please feel free to contact us at (801) 262-7299 or (801) 262-7378 (fax) if you have questions or comments regarding this report. Our web site is located at www.chemtechford.com.

**Dave Gayer** 

Laboratory Director dave@chemtechford.com

**Linda Daniels** 

Customer Representative linda@chemtechford.com

Approved By:

Dave Gayer, Laboratory Director

Page 1 of 4



### Chemtech-Ford Laboratories

### **Certificate of Analysis**

Lab No.: 08 04173

Lab Group No.: 89977

Name:

American West Analytical Labs

Sample Site:

Sample ID:

08 04173

System No:

Sample Type: Solid

Spoils #2 East

Sample Date: Receipt Date: 2/1/2008 12:00 PM 4/8/2008 10:25 AM

Sampler:

CLIENT

Sample Source:

Project:

Sunnyside Cogen PO# 83337

Parameter	Sample Result	Mimimum Reporting Limit	Units	Method	Analysis Date	Analysis Time	Analyst Initials	Flag
Group A - Inorganic								
Total Kjeldahl Nitrogen as N	6500	830	mg/Kg	EPA 351.4	4/17/2008	12:00	TSM	

### **Abbreviations**

ND = Not detected at the corresponding Minimum Reporting Limit.

1 mg/L = one milligram per liter = 1 part per million.

1 ug/L = one microgram per liter = 1 part per billion.

### Flag Descriptions

APH = The test was performed past the EPA specified holding time.

H = A high bias is suspected.

I = The analysis experienced a matrix interference which may have affected the results.

J = The result is positive and estimated. The result falls between the Minimum Reporting Limit and the Method Detection Limit.

L = A low bias is suspected.

O = The analysis was performed by an outside contract laboratory.

R = The value represents a reanalysis.

SPH = The sample was submitted for analysis past the EPA specified holding time.



### Chemtech-Ford Laboratories

### **Certificate of Analysis**

Lab No.: 08 04174

Lab Group No.: 89977

Name:

American West Analytical Labs

Sample Site:

Spoils #2 West

Sample ID:

08 04174

System No:

Sample Type:

Solid

Sample Date:

2/1/2008 12:00 PM 4/8/2008 10:25 AM

Receipt Date: Sampler:

**CLIENT** 

Sample Source:

Project:

Sunnyside Cogen PO# 83337

Parameter	Sample Result	Mimimum Reporting Limit	Units	Method	Analysis Date	Analysis Time	Analyst Initials	Flag
Group A - Inorganic						# 10 m		
Total Kjeldahl Nitrogen as N	6900	830	mg/Kg	EPA 351.4	4/17/2008	12:00	TSM	

### **Abbreviations**

ND = Not detected at the corresponding Minimum Reporting Limit.

1 mg/L = one milligram per liter = 1 part per million.

1 ug/L = one microgram per liter = 1 part per billion.

### Flag Descriptions

APH = The test was performed past the EPA specified holding time.

H = A high bias is suspected.

I = The analysis experienced a matrix interference which may have affected the results.

J = The result is positive and estimated. The result falls between the Minimum Reporting Limit and the Method Detection Limit.

L = A low bias is suspected.

O = The analysis was performed by an outside contract laboratory.

R = The value represents a reanalysis.

SPH = The sample was submitted for analysis past the EPA specified holding time.



### Chemtech-Ford Laboratories Certificate of Analysis

Lab No.: 08 04174 Lab Group No.: 89977

### **Project Comments:**

Both samples in this group (08 04173 and 4174) exhibited an interference during the TKN analysis. To reduce the effect of the interference, multiple dilutions were used. The values reported reflect the lowest dilutions possible without generating additional error by virtue of the dilution itself. Even at this level, some interference was still visible; however, the values were generally reproducible, but with a larger relative error than normal. The results should be interpreted with this in mind.



# American West Analytical Laboratories

Client: American West Analytical Laboratories Address:

463 W. 3600 S.

Salt Lake City, UT 84115

Sunnyside Cogen Project Name:

83337

Contact:

Chain of Custody

(801) 263-8686 Elona Hayward Fax: Phone:

(801) 263-8687

rebekah@awal-labs.com elona@awal-labs.com Email:

Turn Around Time QC Level:

Page 1 of 1

Standard Please contact Rebekah Winkler at AWAL with questions (888) 263-8686. Appropriate Utah state certifications required. Comments Sample Matrix Containers 12:00 12:00 Time Date Sampled 2/1/2008 2/1/2008 FT & Spoils #2 East Spoils #2 West Sample ID:

Special instructions: Include project name and PO# on final report and invoice. Email results to both Rebekah and Elons

	Date: O. A. S.	Time: ,0,101	Date	C. X. CX	16:30
	Selvi Squature	Market de W.C. Folls	Topologi Squature	mos more	Themine Themes
	Date 8 - 8 - 8 Received by	Time: 10:10 min New Co.	S. Carolina Sara The		200
	4	6	id	Forn	
Relia outshed hv - Somming	Marino Khini	Thomise Bruun	Relinquistics of Landaum & La	Plus Manse ELAC 17 C.	

### SAMPLE RECEIVING CHECKLIST

DATE / TIME: 4.8.08 10:05

Lab ID #s: 4173-74

RECEIVED BY:

SC

MATRIX: Water, DW, GW, WW

Sample/s on ice?

(es) No

Soil Solid Oil

Sample/s Sealed? Yes / 60 Sludge: Watery, Solid

	A Aboratory	I was a second second	S of South Control of the Control	Sludge: Watery, Solid Other:	
L	**************************************	Bottle Tempi Degrees C	Bettle	Comments	A .
1	4173-74 2	17	Prepile#	(See Below:)	100 miles
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16				·	
17					
18					
19					
20					
21					

Bottle Ider	Glass
A- Plastic Unpreserved	D- 625
A1/2, AQ, AP, A1/2pt	G- Glass Unpreserved
B- Miscellaneous Plastic	H- HAA's
C- Cyanide	J- 508/515/525
F- Sulfide	O- Oil & Grease
M- Metals	P- Phenois
N- Nutrients	Т- ТОС/ТОХ
R- Radiologicals	U- 531
8- Sludge Cup/Tubs	V- 524 & THM's
Q- Plastic Bags	W- 8260
Special	X- Vial Unpreserved
L- Lab Subsample	Y- 624/504
1,2,3 etc Multiples (B1, B2,)	Z- Miscellaneous Glass

Sample Receiving Comments:
1- Preserved in Receiving.
2- Vials submitted with headspace.

3- Sample received past holding time.

Chemtech-Ford, Inc.



AMERICAN WEST April 22, 2008

WEST ANALYTICAL LABORATORIES

**Rusty Netz** 

Sunnyside Cogeneration

PO Box 159

Sunnyside, UT 84539

463 West 3600 South Salt Lake City, Utah TEL: (435) 888-4476 FAX: (435) 888-2538

iy, Otali 84115

RE: SCA

Dear Rusty Netz:

Lab Set ID: L83337

(801) 263-8686 Toli Free (888) 263-8686 Fax (801) 263-8687

⇒mail: awal@awal-labs.com

American West Analytical Labs received 2 samples on 4/4/2008 for the analyses presented in the following report.

All analyses were performed in accordance to National Environmental Laboratory Accreditation Program (NELAP) protocols unless noted otherwise. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross Laboratory Director

Thank you.

Jose Rocha QA Officer

Approved by

Laboratory Director or designee

Report Date: 4/22/2008 Page 1 of 7





### **INORGANIC ANALYSIS REPORT**

Client:

Project ID: SCA

Sunnyside Cogeneration

Contact: Rusty Netz

**AMERICAN** WEST **ANALYTICAL LABORATORIES**  Lab Sample ID: L83337-01B

Field Sample ID: Spoils #2 East Collected: 2/1/2008 12:00:00 PM

Received: 4/4/2008

463 West 3600 South Salt Lake City, Utah 84115

TOTAL METALS		Date	Method	Reporting	Analytica	.1
Analytical Results	Units	Analyzed	Used	Limit	Results	
Boron	mg/kg-dry	4/16/2008 4:07:00 PM	6010B	250	< 250	*
Calcium	mg/kg-dry	4/16/2008 4:07:00 PM	6010B	510	13000	•
Magnesium	mg/kg-dry	4/16/2008 4:07:00 PM	6010B	510	3300	*
Selenium	mg/kg-dry	4/15/2008 10:58:52 PM	6020	4.3	< 4.3	
Sodium	mg/kg-dry	4/16/2008 4:07:00 PM	6010B	510	< 510	•

<sup>\*</sup> The reporting limits were raised due to sample matrix interference.

(801) 263-8686 Toll Free (888) 263-8686 Fax (801) 263-8687 e-mail: awal@awal-labs.com



Jose Rocha **QA Officer** 

Report Date: 4/22/2008 Page 2 of 7





Client:

Sunnyside Cogeneration

Project ID: SCA

Contact: Rusty Netz

**AMERICAN ANALYTICAL** 

**LABORATORIES** 

Lab Sample ID: L83337-02B

Field Sample ID: Spoils #2 West Collected: 2/1/2008 12:00:00 PM

Received: 4/4/2008

463 West 3600 South Salt Lake City, Utah 84115

TOTAL METALS		Date	Method	Reporting	Analytical		
Analytical Results	Units	Analyzed	Used	Limit	Results		
Boron	mg/kg-dry	4/16/2008 4:10:00 PM	6010B	270	< 270	*	<del></del>
Calcium	mg/kg-dry	4/16/2008 4:10:00 PM	6010B	540	13000	*	
Magnesium	mg/kg-dry	4/16/2008 4:10:00 PM	6010B	540	3400	*	
Selenium	mg/kg-dry	4/15/2008 11:04:16 PM	6020	4.6	< 4.6		
Sodium	mg/kg-dry	4/16/2008 4:10:00 PM	6010B	540	3300	*	<b>4</b>
A ===	· ·						

<sup>\*</sup> The reporting limits were raised due to sample matrix interference.

(801) 263-8686 Toll Free (888) 263-8686 Fax (801) 263-8687 e-mail: awal@awal-labs.com



Kyle F. Gross **Laboratory Director** 

> Jose Rocha QA Officer

> > Report Date: 4/22/2008 Page 3 of 7





### **ANALYTICAL REPORT**

Client: Sun

Sunnyside Cogeneration

Project ID:: SCA

Contact: Rusty Netz

AMERICAN WEST ANALYTICAL LABORATORIES Lab Sample ID: L83337-01A Field Sample ID: Spoils #2 East

Collected: 2/1/2008 12:00:00 PM

Received: 4/4/2008

Analyzed: 4/5/2008 8:30:00 PM

Analysis Requested: USC

Result

**USC** 

463 West 3600 South Salt Lake City, Utah 84115

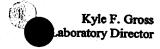
**Uniform Soil Classification** 

GP-GM - Poorly graded gravel with silt and sand

н

H - Sample was received outside of holding time.

(801) 263-8686 Toll Free (888) 263-8686 Fax (801) 263-8687 3-mail: awal@awal-labs.com



Jose Rocha QA Officer

Report Date: 4/22/2008 Page 4 of 7





Client:

Sunnyside Cogeneration

Project ID:: SCA

Contact: Rusty Netz

**AMERICAN** 

WEST

ANALYTICAL LABORATORIES Lab Sample ID: L83337-02A

Field Sample ID: Spoils #2 West Collected: 2/1/2008 12:00:00 PM

Received: 4/4/2008

Analyzed: 4/5/2008 8:00:00 PM

Analysis Requested: USC

4

Result

USC

463 West 3600 South Salt Lake City, Utah 84115

**Uniform Soil Classification** 

GP-GM - Poorly graded gravel with silt and sand

H

H - Sample was received outside of holding time.

(801) 263-8686 Toll Free (888) 263-8686 Fax (801) 263-8687 e-mail: awal@awal-labs.com



Kyle F. Gross Laboratory Director

> Jose Rocha QA Officer

> > Report Date: 4/22/2008 Page 5 of 7





### **INORGANIC ANALYSIS REPORT**

Client:

Sunnyside Cogeneration

Project ID: SCA

Contact: Rusty Netz

**AMERICAN** ANALYTICAL LABORATORIES

Lab Sample ID: L83337-01

Field Sample ID: Spoils #2 East Collected: 2/1/2008 12:00:00 PM

Received: 4/4/2008

463 West 3600 South Salt Lake City, Utah

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	
Conductivity	μmhos/cm	4/6/2008 11:00:00 AM	9050A	10	3300	*H
Nitrate (as N)	mg/kg-dry	4/9/2008 9:12:00 AM	353.2	0.010	0.57	H
Nitrate/Nitrite (as N)	mg/kg-dry	4/9/2008 9:12:00 AM	353.2	0.010	0.63	н
pH @ 25° C	pH units	4/4/2008 6:45:00 PM	9045D	1.00	7.27	H
SAR		4/16/2008		0.010	1.4	
Total Nitrogen (as N)	mg/kg-dry	4/22/2006	•	0.10	6800	H #
Total Volatile Solids	% of TS	4/7/2008 2:30:00 PM	160.4	0.010		H

(801) 263-8686 Toll Free (888) 263-8686 Fax (801) 263-8687

e-mail: awal@awal-labs.com

H - Sample was received outside of holding time.

\*Analysis is performed on a 1:1 DI water extract for soils.

# Total Nitrogen is a summary of AWAL and subcontracted data.

Kyle F. Gross aboratory Director

> Jose Rocha QA Officer





### **INORGANIC ANALYSIS REPORT**

4/7/2008 2:30:00 PM

Client:

Sunnyside Cogeneration

Project ID: SCA

Contact: Rusty Netz

160.4

0.010

20

H

**AMERICAN** WEST ANALYTICAL **LABORATORIES** 

Lab Sample ID: L83337-02

Field Sample ID: Spoils #2 West Collected: 2/1/2008 12:00:00 PM

Received: 4/4/2008

Total Volatile Solids

	Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	
463 West 3600 South	Conductivity	μmhos/cm	4/6/2008 11:00:00 AM	9050A	10	3300	*H
Salt Lake City, Utah 84115	Nitrate (as N)	mg/kg-dry	4/9/2008 9:12:00 AM	353.2	0.010	0.42	H
	Nitrate/Nitrite (as N)	mg/kg-dry	4/9/2006 9:12:00 AM	353.2	0.010	0.51	H
	pH @ 25° C	pH units	4/4/2008 6:45:00 PM	9045D	1.00	7.38	H
(801) 262 9696	SAR		4/16/2008		0.010	1.1	
	Total Nitrogen (as N)	mg/kg-dry	4/22/2008		0.10	7200	H#

(801) 263-8686 Toll Free (888) 263-8686 Fax (801) 263-8687 e-mail: awal@awal-labs.com

H - Sample was received outside of holding time.

% of TS

Kyle F. Gross **Laboratory Director** 

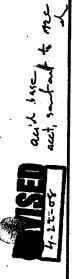
> Jose Rocha QA Officer

> > Report Date: 4/22/2008 Page 7 of 7

<sup>\*</sup>Analysis is performed on a 1:1 DI water extract for soils.

<sup>#</sup> Total Nitrogen is a summary of AWAL and subcontracted data.

## American West Analytical Labs



WORK ORDER Summary

SUN100 Client ID:

QC Level: QC1 Location:

Work Order L83337 22-Apr-08

QCLevel: QC 1 / Footnote report, WC parameters received outside of hold. Sample is also for Acid Based Acct. Sample for Sulfur sent to Timpview, sample for Contact: Rusty Netz SCA Comments: Project:

Sample ID	Client Sample ID	Collection Date	Date Received	Date Due	Matrix	Test Code	Storage	
L83337-01A	Spoils #2 East	2/1/2008 12:00;00 PM	4/4/2008	4/25/2008	Soil	COND-A-S	apr 4 - wo/share	-
				4/25/2008		PH-9045D	apr 4 - wc/share	-
				4/25/2008		SAR-S	apr 4 - wc/share	-
			٠	4/25/2008		Soil_Prep	apr 4 - wc/share	-
				4/25/2008		TVS-S	apr 4 - wc/share	-
				4/25/2008		usc	apr 4 - wc/share	-
L83337-01B				4/25/2008	-	3051A-ICPMS	apr 4 - wc/share	-
				4/25/2008		· 6020-S	apr 4 - wc/share	-
	-			4/25/2008		ICP-S	apr 4 - wc/share	-
				4/25/2008		NO2/NO3-S	apr 4 - wc/share	-
				4/25/2008	170 800-7	NO3-S	apr 4 - wo/share	1
				4/25/2008		PMOIST	apr 4 - wc/share	-
-		•		4/25/2008		Soil_Prep	apr 4 - wc/share	-
				4/25/2008		TOTAL NITROGEN	apr 4 - wc/share	-
L83337-01C				4/25/2008		SHIPPR	timpview-sulfur	-
			•	4/25/2008		SUB-SULFUR	timpview-sulfur	-
L83337-01D	•	•		4/25/2008		OUTSIDE LAB	chemtech-tkm	-
L83337-01E				4/25/2008		OUTSIDE LAB	azc labs	-
L83337-02A	Spoils #2 West		•	4/25/2008		COND-A-S	apr 4 - wc/share	-
•	Planta de la companya			4/25/2008		PH-9045D	apr 4 - wc/share	-
				4/25/2008		SAR-S	apr 4 - wc/share	-
				4/25/2008		Soil_Prep	apr 4 - wc/share	-
				4/25/2008	77	TVS-S	apr 4 - wc/share	-
				4/25/2008		USC	apr 4 - wc/share	-
L83337-02B				4/25/2008		3051A-ICPMS	apr 4 - wc/share	-
				4/25/2008		6020-S	apr 4 - wc/share	-
				4/25/2008		ICP-S	apr 4 - wc/share	-

1 of 2

### WORK ORDER Summary

SUN100 Client ID:

Project:

QC Level: QC 1 Location:

Work Order L83337

22-Apr-08

QCLevel: QC 1 / Footnote report, WC parameters received outside of hold. Sample is also for Acid Based Acct. Sample for Sulf Contact: Rusty Netz Comments:

		a report, we parameters	Tecested outside of II	ioid. Sampie is ais	o lor Acid Ba	sed Acct. Sample for Sul	services and a services of the
Sample ID	Client Sample ID	Collection Date	Date Received	Date Due	Matrix	Test Code	Storage
L83337-02B	Spoils #2 West	2/1/2008 12:00:00 PM	4/4/2008	4/25/2008	Soil	NOZ/NO3-S	apr 4 - wo/share
-				4/25/2008		NO3-S .	apr 4 - wc/share 1
				4/25/2008		PMOIST	apr 4 - wc/share
	•			4/25/2008		Soil_Prep	apr 4 - wc/share
				4/25/2008		TOTAL NITROGEN	apr 4 - wc/share
L83337-02C		•		4/25/2008		SHIPPR	timpview-sulfur 1
	-			4/25/2008		SUB-SULFUR	timpview-sulfur 1
L83337-02D				4/25/2008		OUTSIDE LAB	chemtech-tkn 1
L83337-02E				4/25/2008		OUTSIDE LAB	1 state labs

## American West Analytical Labs

WORK ORDER Summary

*07-Apr-08* Work Order . L83337

SUN100 SCA Client ID: Project:

QC Level: QC 1 Location:

Contact: Rusty Netz

Comments:	OCLevel: OC 1 / Footno	ote report. WC parameter	cocation.	hold Samule is a	lo for A oid Do	Contact: Kusty Netz	OCLEVE!: OC 1 / Footnote report WC narameters received outside of hold Somple is also for Acid Done 1 Acid Somple South Somple is also for Acid Done 1 Acid South	
Sounds ID	Ollent Stand		TO anigmo matrocare	o er ardinac mon	BG DISA IOI DET	sed Acct. Sample Ior Su.	nur sent to 1 impview, san	nple for
Sample 1D	Cuent Sample LD	Collection Date	Date Received	Date Due	Matrix	Test Code	Storage	
L&3337-01A	Spoils #2 East	2/1/2008 12:00:00 PM	4/4/2008	4/18/2008	Soil	ACID-BASE ACCT.	apr 4 - wc/share	-
		-		4/18/2008		COND-A-S	apr 4 - wc/share	-
				4/18/2008		PH-9045D	apr 4 - wc/share	-
				4/18/2008		SAR-S	apr 4 - wc/share	-
-				4/18/2008		Soil_Prep	apr 4 - wc/share	-
				4/18/2008		TVS-S	apr 4 - wc/share	-
				4/18/2008		USC	apr 4 - wc/share	-
L83337-01B	•			4/18/2008		305 LA-ICPMS	apr 4 - wc/share	-
			•	4/18/2008		6020-S	apr 4 - wc/share	-
			•	4/18/2008		ICP-S	apr 4 - wc/share	-
				4/18/2008		NO2/NO3-S	apr 4 - wc/share	-
			•	4/18/2008		NO3-S	apr 4 - wc/share	-
				4/18/2008		PMOIST	apr 4 - wc/share	
				4/18/2008		Soil_Prep	apr 4 - wc/share	-
				4/18/2008		TOTAL NITROGEN	apr 4 - wc/share	-
L83337-01C				4/18/2008		SHIPPR	. timpview-sulfur	-
				4/18/2008		SUB-SULFUR	timpview-sulfur	-
				4/18/2008		OUTSIDE LAB	chemtech-tkm	-
L83337-02A	Spoils #2 West			4/18/2008		ACID-BASE ACCT.	apr 4 - wc/share	-
				4/18/2008		COND-A-S	apr 4 - wc/share	-
				4/18/2008		PH-9045D	apr 4 - wc/share	-
				4/18/2008		SAR-S	apr 4 - wc/share	-
			•	4/18/2008		Soil_Prep	. apr.4 - wc/share.	-
				4/18/2008		TV8-S	apr 4 - wc/share	-
			•	4/18/2008	••	usc	apr 4 - wc/share	-
L83337-02B			•	4/18/2008	•	3051A-ICPMS	apr 4 - wc/share	-
	-		· ·	4/18/2008		S-0209	apr 4 - wc/share	-

1 of 2 Page

WORK ORDER Summary

SUN100 SCA Client ID:

07-Apr-08 Work Order L83337

QC Level: QC 1 Location: Project:

QCLevel: QC 1 / Footnote report, WC parameters received outside of hold. Sample is also for Acid Based Acct. Sample for Sulfur sent to Timpview, sample for Contact: Rusty Netz Comments:

	-	-	1	-	1	-	1	-	-
Storage	apr 4 - wc/share	apr 4 - wc/share	apr 4 - wc/share	apr 4 - wc/share	apr 4 - wc/share	apr 4 - wc/share	timpview-suffur	timpview-sulfur	chemtech-tkn
Test Code	ICP-S	NO2/NO3-S	NO3-S	PMOIST	Soil_Prep	TOTAL NITROGEN	SHIPPR	SUB-SULFUR	OUTSIDE LAB
Matrix	Soil		-		٠				
Date Due	4/18/2008	4/18/2008	4/18/2008	4/18/2008	4/18/2008	4/18/2008	4/18/2008	4/18/2008	4/18/2008
Date Received	4/4/2008	•	٠	-					
Collection Date	2/1/2008 12:00:00 PM		-	-					
Client Sample ID	Spoils #2 West								
Sample ID	L83337-02B						L83337-02C		L83337-02D

American West AnAly

COMPANY: SULLA

Same		7.7	Joseph	
<b>V</b>	TATE/ZIP:	DER #:	REQUIRED:*	Expedied tumeround subject to additional chapter
ILLING ADDRESS:	HELLING CITY/8TATE/ZIP:	URCHASE ORDER #:	URNAROUND REQUIRED:*	expedied rum

CHAIN OF CUSTODY

 $\Box$  Mark 'X' here if you want a copy sent to DEQ Division of Drinking Water. 8333  $\mathcal F$ 

						/	<u> </u>	\	\		
ANALYTICAL TESTS REQUESTED	STAN DE CONTROL OF THE CONTROL OF TH		1 NO 104 A.C.				000 1000 000 000 000 000 000 000 000 00	U37 + OOY - X47 - 73			ON ICE NOT ON ICE
MATRIX	Water Ground Wester Water Water Ground Wester Ground Wester Ground Wester Solid Sludge [Liquid]  Sindge [Solid] Sludge [Liquid]	×	X	<i>c</i>		κ.			<b>/</b>	Sampled by: [signature]	
	SAMPLE LOCATION SAMPLE SAMPLE TIME	Doils #2 East 211108 NOON	2 11 11 14 Wrest DI 108 Now	3.	4.	13	 7.	 9.		pled by: [print]	
	8 O										

Dette/Time	Date/Time	Date/Jime	62-7378 www.chemtechford.com
received by: [signature]	Hecsived by: [signature]	Received by yestimentume)	7 Phone: 801-262-7299 FAX: 807-262-7378
13/808/12		DateTime	fratter Ave. (380 West) Murray, UT 84107
The last	7	ion relation by [agintative]	CHEMTECH-FORD 6100 South-Stration

NOT ON ICE

Special Instructions:

### Rebekah Winkler

From:

Pat Noteboom

Sent:

Thursday, June 08, 2006 10:39 AM

To: Cc:

Lynn Turner -

Subject;

AWAL-MGT; AWAL-Office

RE: Phone call: Please call Rusty Metz @ Sunnyside Power plant in Carbon 435-888-4476

Randy will soon send us his three samples. We'll send the sulfur out to Timpview. The rest we can do here. The Acid Neutralizing Pot., Acid Based Acct. and total and AP Sulfur are all part of Acid Base Accounting on our price list for \$150. Fortunately, CEC is conspicuously absent from his list.

-Original Message

Promi Sent:

Lynn Turner

Tor..

Subjects

Thursday, June 08, 2006 9:28 AM Pat Noteboom .

Phone call: Please call Rusty Metz @ Sunnyside Power plant in Carbon 435-888-4476 x 107

He's got a list of soil perameters that we'd have to send out....they include

ън,

Acid Nuetralizing Pot Conductivity
% sand, clay, silt
Texture (USC??)
Fotal Cat Se, boron, Mg
Acid Based Acct Sulphur-total and APK

**Nitrate** 

∕Total Nitrogen : ←

TOC on soil???? ₩ SAR

fast so. June 04, 2004, Sunnyside Operations P.O. Box 159 #1' Power Plant Road Sunnyside, UT :84539 USA Client Sample ID: Date Received: Matrix: Project Name/# SGS Sample ID: 072-9346-004 Analyte. Neutralization Potential
Genductivity
Sand i
Calciute, Soluble
Carbon, Total Organic 7.72 s.u. 140 t/1000t 7.39 mmhos/cm 82 % 56.5 meq/L Acid Base Potential.

Sulfig Total

Nitrogen Mitrate
Selenium, Hoff Water

VBoron, Total

Nitrogen Total 90.9 t/1000t 1.57 % 5.32. ppm 0.09<ppm;\*\*
1.05 ppm Nitrogen, Total: Silt Magnesium, Soluble 66. **#**Vinea/L Clay Sodium, Soluple Texture Class

SES Porth A natice Ltd. | Minerals Services Division

# American West Analytical Labs

WORK ORDER Summary

SUN100 DOGM Client ID:

OC Level: 1

Work Order L77459 25-Apr-07

Contact: Rusty. Netz.

			•	くさ	,		Contract: Dusty Nets.		
Project:	D06M	٠.		Location:			ביין דיין ניין דיין		
Comments:	QCLevel: 1. Su	Ifur sent to	Timpview. Also for	QCLevel: 1. Sulfur sent to Timpview. Also for Acid Base Accounting. Footnote report, wetchem received outside of hold.	Footnote report,	wetchem rece	ived outside of hold.		
Somple ID	Client Sample ID		Collection Date	Date Received	Date Due	Matrix	Test Code	Storage	
L77459-01A	North		12/14/2006	4/25/2007	5/9/2007	Solid	COND-A-S	spr 25 - vvc	-
					5/9/2007		7 OS406:H4	. apr 25 - wo	1
					\$/9/2007		SAR-S V.	врг 25 - wo	-
	,				5/9/2007		· Soil_Prep	apr 25 - wo	-
					5/9/2007		TV8-S	spr 25 - wc	-
					5/9/2007		\square \chi_{\text{osn}}	apr 25 - wc .	-
L77459-01B					5/9/2007	-	3051A-ICPMS	apr 25 - wo	-
					59/2007		. 8-0209	upr 25 - we .	-
					\$92007		1CP-S	apr 25 - wo	-
					5/9/2007		NOZNO3-8	apr 25 - wo	+
					5/9/2007		N03-8	. apr 25 - wo	-
					5/9/2007		PMOIST /	арг 25 - 740	
					5/9/2007		Soll_Prep	apr 25 - wo	-
					5/9/2007		TICHS	apr 25 - wo	1
					5/9/2007	-	TKN-S_Prep	apr 25 - wo /	-
					5/9/2007		TOTAL NITROGEN	apr 25 - 140	-
L77459-01C	,			•	5/9/2007		SHIIPPR	Timpview	-
					5/9/2007		SUB-SULFUR	Timpview	-
L77459-02A		1			. 5/9/2007		COND-A-S	Rpr 25 - Wo	-
					.5/9/2007		PH-9045D	apr 25 - wc	-
				•	5/9/2007		SAR-S	spr 25 - wc	-
					5/9/2007		Soil Prep	spr 25 - wc	<b>-</b>
		1			5/9/2007		TVS-S	apr 25 - 7vc .	-
		1	57/100		5/9/2007	•	USC ·	apr 25 - wo	-
L77459-02B		1	- ( - / - /		5/9/2007	:	3051A-ICPMS	арг 25 - то	
		1		·	2/9/2007	•	6020-8	apr 25 - wo	-
		ľ			5/9/2007		ICP-&:	apr 25 - we	1
		1						Page 1 of 3	



### APPENDIX B-3 WATER MONITORING



### APPENDIX B-3 WATER MONITORING

### FIRST QUARTER



### **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

April 23, 2008

Darron Haddock Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

Subject:

Quarterly Sampling Report

Monitoring Period: January, February, March 2008

DOGM Operational Water Monitoring

Dear Darron:

This letter is to confirm that the quarterly baseline water sampling data and the UPDES DMR data, have been submitted to the DOGM EDI web site. The data is correct and ready to be processed.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blakev

Agent For

Sunnyside Cogeneration Associates

c.c. Steve Gross William Rossiter Ramiro Garcia Paul Shepard Rusty Netz Plant File

## Sunnyside Cogeneration Facility Sunnyside, Utah

## Field Parameter Data

DOGM Permit Boundry Water Quality Monitoring Plan Monitoring Period: First Quarter 2008 Samples taken March 19, 2008

					Dissolved	Flow	Flow
	Location	Temp.	Æ	သွ	Oxygen	Rate	method
Monitoring Location	I.D.	(C)	(sn)	(umhos)	(l/gm)	(gpm)	
Icelander Creek	ICE-1	A A	NA	NA	NA	NA	A A
Columbia Dugway Spring	F-2	<del>-</del> -	8.33	1746	11	25	2
Coarse Refuse Seep Source	CRS	A	NA	Ą	Ϋ́	NA	AA
Coarse Refuse Seep Boundary	CRB	1.2	8.13	5520	-	20	2
Dragerton Well	Well-1	Ą	NA	A A	ΝΑ	N A	ΑN
Borehole B-6	B-6	N N	N	ΝN	MN	ΝN	ΝN

### Notes:

na - no flow

NW- no water present

NW/F- no water present frozen

nd - data is not available due to lack of discharge

- 1- Flow rates were measured using a weir.
- 2 Flow rates were measured using a calibrated container and stopwatch method.
  - 3 Flow rates were measured using the floating debris method.
    - 4 Flow rates were measured using a meter



April 7, 2008

Sunnyside Cogeneration Assoc. P.O. Box 10 East Carbon Utah 84520

Kind of sample Water

reported to us

Sample taken at Sunnyside Cogeneration

Sample taken by Richard Safley

Date sampled March 19, 2008

Date received March 20, 2008

Sample identification by Sunnyside Cogeneration Assoc.

ID:F2

RECEIVED 1130

SAMPLED 0900

FIELD MEASUREMENTS

FLOW 25 COND 1746 TEMP 1.1

8.33 pH

D.O. 11.0

PH EXPIRED WHEN RECEIVED

DIS.METALS

FILTERED @ LAB

Page 1 of 1

Analysis report no.

59-30969

					Analyzed	
Parameter	Result	MRL	Units	Method	Date/Time/Anal	.yst
alinity, Bicarbonate	412	5	mg/l as CaCo	O <sub>3</sub> SM2320-B	03-24-2008 1715	CDM
alinity, Carbonate	40	5	mg/l as CaCo	O <sub>3</sub> SM2320-B	03-24-2008 1715	CDM
Arkalinity, Total	451	5	mg/l as CaCo	O <sub>3</sub> SM2320-B	03-24-2008 1715	CDM
Anions	21.7		meg/l		04-03-2008 0815	SJ
Calcium, Dissolved	93.22	0.03	mg/l	EPA 200.7	03-27-2008 1520	DI
Cations	21.3		meg/l		04-03-2008 0815	SJ
Chloride	40	1	mg/l	EPA 300.0	03-24-2008 2259	DI
Hardness, Total	673			O <sub>3</sub> SM2340-B	04-03-2008 0815	SJ
Iron, Total	0.15	0.050	mg/l	EPA 200.7	03-25-2008 1325	GF
Iron, Dissolved	<0.03	0.030	mg/l	EPA 200.7	03-27-2008 1520	DI
Magnesium, Dissolved	106.94	0.01	mg/l	EPA 200.7	03-27-2008 1520	DI
Manganese, Total	0.016	0.002	mg/l	EPA 200.7	03-25-2008 1325	GF
Manganese, Dissolved	0.011	0.002	mg/l	EPA 200.7	03-27-2008 1520	DI
Oil & Grease	<2	2	mg/l	EPA 413.1	04-01-2008 0830	GF
рН	8.31		pH units	SM4500-H+	03-20-2008 1218	CDM
pH Sample Temp.	14.5		Deg C	SM4500-H+	03-20-2008 1218	CDM
Potassium, Dissolved	3.57	0.14	mg/l	EPA 200.7	03-27-2008 1520	DI
Sodium, Dissolved	178.89	0.09	mg/l	EPA 200.7	03-27-2008 1520	DI
Solids, Settleable	<0.1	0.1	m1/1	SM2540-F	03-20-2008 1230	CDM
Solids, Total Dissolved	1300	30	mg/l	SM2540-C	03-25-2008 1230	CDM
Solids, Total Suspended	<5	5	mg/l	SM2540-D	03-25-2008 1230	CDM
Sulfate	556	1	mg/l	EPA 300.0	03-24-2008 2259	DI
Cation/Anion Balance	-0.9		8		04-03-2008 0815	SJ

Respectfully submitted, GS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

P.O. Box 1020, Huntington, UT 84528 t (435) 653-2311 f (435) 653-2436 www.us.sgs.com/minerals



APR 1 1 2008

April 4, 2008

Sunnyside Cogeneration Assoc. P.O. Box 10 East Carbon Utah 84520

ID:CRB

Kind of sample Water

reported to us

Sample taken at Sunnyside Cogeneration

Sample taken by Richard Safley

Date sampled March 19, 2008

Date received March 20, 2008

RECEIVED 1130 SAMPLED 0830

FIELD MEASUREMENTS

Sunnyside Cogeneration Assoc.

FLOW 20 COND 5520 TEMP 1.2 pН 8.13

D.O. 11.0

PH EXPIRED WHEN RECEIVED

Sample identification by

DIS.METALS FILTERED @ LAB

Page 1 of 1

Analysis report no. 59-30968

Analyzed

Parameter	Result	MRL	Units	Method	Date/Time/Anal	yst
kalinity, Bicarbonate	383	5		aCO3 SM2320-B	03-24-2008 1715	CDM
talinity, Carbonate	<5	5		aCO <sub>3</sub> SM2320-B	03-24-2008 1715	CDM
Alkalinity, Total	383	5		aCO3 SM2320-B	03-24-2008 1715	CDM
Anions	83.8		meg/l		04-03-2008 0915	DI
Calcium, Dissolved	438.11	0.03	mg/l	EPA 200.7	03-27-2008 1520	DI
Cations	79.5		meq/l		04-03-2008 0915	DI
Chloride	138	1	mg/l	EPA 300.0	03-24-2008 2127	DI
Hardness, Total	2733		mg/l as C	CaCO <sub>3</sub> SM2340-B	04-03-2008 0915	DI
Iron, Total	<0.05	0.050	mg/l	EPA 200.7	03-25-2008 1320	GF
Iron, Dissolved	< 0.03	0.030	mg/l	EPA 200.7	03-27-2008 1520	DI
Magnesium, Dissolved	397.94	0.01	mg/l	EPA 200.7	03-27-2008 1520	DI
Manganese, Total	0.066	0.002	mg/l	EPA 200.7	03-25-2008 1320	GF
Manganese, Dissolved	0.066	0.002	mg/1	EPA 200.7	03-27-2008 1520	DI
Oil & Grease	<2	2	mg/1	EPA 413.1	04-01-2008 0830	GF
рН	8.06		pH units	SM4500-H+	03-20-2008 1215	CDM
pH Sample Temp.	14.8		Deg C	SM4500-H+	03-20-2008 1215	CDM
Potassium, Dissolved	35.86	0.14	mg/1	EPA 200.7	03-27-2008 1520	DI
Sodium, Dissolved	551.01	0.09	mg/l	EPA 200.7	03-27-2008 1520	DI
Solids, Settleable	<0.1	0.1	m1/1	SM2540-F	03-20-2008 1230	CDM
Solids, Total Dissolved	5772	30	mg/l	SM2540-C	03-25-2008 1230	CDM
Solids, Total Suspended	<5	5	mg/1	SM2540-D	03-25-2008 1230	CDM
Sulfate	3471	1	mg/l	EPA 300.0	03-24-2008 2127	DI
Cation/Anion Balance	-2.7	·	용		04-03-2008 0915	DI

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc. | Minerals Services Division

P.O. Box 1020, Huntington, UT 84528 t (435) 653-2311 t (435) 653-2436 www.us.sgs.com/minerals



### APPENDIX B-3 WATER MONITORING

### **SECOND QUARTER**



### **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

July 14, 2008

Darron Haddock Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

Subject: Quarterly Sampling Report

Monitoring Period: April, May, June 2008

DOGM Operational Water Monitoring

Dear Darron:

This letter is to confirm that the quarterly baseline water sampling data and the UPDES DMR data, have been submitted to the DOGM EDI web site. The data is correct and ready to be processed.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You.

Michael J. Blakey

Agent For

Sunnyside Cogeneration Associates

c.c. Steve Gross
 William Rossiter
 Maggie Estrada
 Paul Shepard
 Rusty Netz
 Plant File

### **Sunnyside Cogeneration Facility** Sunnyside, Utah

### **Field Parameter Data**

DOGM Permit Boundry Water Quality Monitoring Plan Monitoring Period: Second Quarter 2008 Samples taken June 17, 2008

0 A V 4 W	100 NA 20 150	10.7 NA 5.9 11	1941 NA 6190 543	8.4 NA 8.65	11.5 NA 13.6 NW	CRS CRB Well-1	Columbia Dugway Spring Coarse Refuse Seep Source Coarse Refuse Seep Boundary Dragerton Well Borehole B-6
	20	11	1941	8.38	13.2	ICE-1	Icelander Creek
	(gpm)	(mg/l)	(umhos)	(su)	(C)	I.D.	Monitoring Location
	Rate	Oxygen	SC	PH	Temp.	Location	
	Flow	Dissolved			-		

### Notes:

na - no flow

NW- no water present

NW/F- no water present frozen

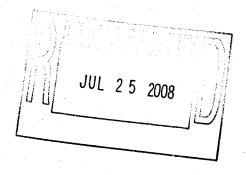
nd - data is not available due to lack of discharge

- Flow rates were measured using a weir.
- 2 Flow rates were measured using a calibrated container and stopwatch method.
- 3 Flow rates were measured using the floating debris method.
- 4 Flow rates were measured using a meter



**SUNNYSIDE COGENERATION FAC** PO BOX 10

EAST CARBON UT 84520



Page 1 of 2

Client Sample ID:

**CRB** 

Date Sampled: Date Received:

Jun 17, 2008 Jun 18, 2008

Product Description: WATER

Sample ID By

Sample Taken At Sample Taken By

**Time Sampled** Time Received

Mine Site

Field - Flow

Field - Conductivity

Field - Dis. Oxygen Field - Temperature

Field - pH

Sunnyside Cogeneration Assoc.

**CRB** R.N. 08:20

10:30 27

9 20 GPM

6190 UMHOS/CM

5.9 MG/L 13.6 DEG. C

8.06 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved; AMMENDED U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-001

			REGULATORY	A	NALYZE	D
PARAMETER	RESULT	METHOD	LEVEL	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	07/01/2008	09:15	DI
Chloride, Cl	130 mg/L	EPA 300.0	1	06/24/2008	18:10	DI
Sulfate, SO4	3822 mg/L	EPA 300.0	1	06/24/2008	18:10	.DI
Anions	87.80 meg/L	SM1030	0	07/02/2008	14:13	SJ
Cations	90.60 meg/L	SM1030	0	07/02/2008	14:15	SJ
Balance	1.60 %	SM1030	-10	07/02/2008	14:15	SJ
Alkalinity, mg CaCO3/L (pH 4.5)	230 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Bicarbonate Alkalinity as CaCO3	230 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Carbonate Alkalinity as CaCO3	<5 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Hardness, mg equivalent CaCO3/L	2969 mg/L	SM2340-B	1	07/02/2008	14:16	SJ
Total Dissolved Solids	6460 mg/L	SM2540-C	30	06/19/2008	12:30	CM
Total Suspended Solids	<5 mg/L	SM2540-D	5	06/19/2008	12:30	CM
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	06/18/2008	15:00	GF
pH	8.23 s. u.	SM4500-H	0.01	06/18/2008	12:28	CM
pH Temperature	19.80 °C	SM4500-H	0.01	06/18/2008	12:28	CM
METALS BY ICP						
Calcium, Ca - Dissolved	462.34 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Iron, Fe - Total	<0.05 mg/L	EPA 200.7	0.05	06/25/2008	19:07	CM

Respectfully submitted, SS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

P.O. Box 1020, Huntington, UT 84528 t (435) 653-2311 (f (435) 653-2436 www.us.sgs.com/minerals



**SUNNYSIDE COGENERATION FAC** 

PO BOX 10

EAST CARBON UT 84520



Page 2 of 2

Client Sample ID:

CRB

Date Sampled:

Jun 17, 2008 Jun 18, 2008

Date Received: Product Description:

**WATER** 

Sample ID By

Sunnyside Cogeneration Assoc. **CRB** 

Sample Taken At Sample Taken By Time Sampled

R.N. 08:20

Time Received Mine

10:30 27 9

Site Field - Flow

**20 GPM** 

Field - Conductivity

6190 UMHOS/CM

Field - Dis. Oxygen Field - Temperature 5.9 MG/L 13.6 DEG. C

Field - pH

8.06 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved; AMMENDED U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-001

REGULATORY	A	NALYZE	D
HOD LEVEL	DATE	TIME	ANALYST
	***************************************		
200.7 0.03	06/24/2008	21:11	GF
200.7 0.01	06/24/2008	21:11	GF
200.7 0.002	06/25/2008	19:07	CM
200.7 0.002	06/24/2008	21:11	GF
200.7 0.14	06/24/2008	21:11	GF
200.7 0.09	06/24/2008	21:11	GF
	ZHOD         LEVEL           200.7         0.03           200.7         0.01           200.7         0.002           200.7         0.002           200.7         0.14	HOD         LEVEL         DATE           200.7         0.03         06/24/2008           200.7         0.01         06/24/2008           200.7         0.002         06/25/2008           200.7         0.002         06/24/2008           200.7         0.01         06/24/2008           200.7         0.14         06/24/2008	CHOD         LEVEL         DATE         TIME           200.7         0.03         06/24/2008         21:11           200.7         0.01         06/24/2008         21:11           200.7         0.002         06/25/2008         19:07           200.7         0.002         06/24/2008         21:11           200.7         0.14         06/24/2008         21:11

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

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**SUNNYSIDE COGENERATION FAC PO BOX 10** 

EAST CARBON UT 84520

Page 1 of 2

Client Sample ID:

ICE-1

Date Sampled: Date Received: Jun 17, 2008 Jun 18, 2008

**Product Description:** 

**WATER** 

Sample ID By

Sunnyside Cogeneration Assoc.

Sample Taken At Sample Taken By **Time Sampled** 

R.N. 08:50

ICE-1

Time Received Mine

10:30 27

Site Field - Flow

12 **20 GPM** 

Field - Conductivity

**1941 UMHOS/CM** 

Field - Dis. Oxygen Field - Temperature 11.0 MG/L 13.2 DEG. C

Field - pH

8.38 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved AMMENDED U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-002

			REGULATORY	A	NALYZE	D
PARAMETER	RESULT	<b>METHOD</b>	<u>LEVEL</u>	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	06/25/2008	09:00	DI
Chloride, Cl	45 mg/L	EPA 300.0	1	06/24/2008	18:10	DI
Sulfate, SO4	647 mg/L	EPA 300.0	. 1	06/24/2008	18:10	DI
Anions	21.50 meg/L	SM1030	Ö	07/02/2008	14:13	SJ
Cations	23.70 meg/L	SM1030	0	07/02/2008	14:15	SJ
Balance	4.80 %	SM1030	-10	07/02/2008	14:15	SJ
Alkalinity, mg CaCO3/L (pH 4.5)	338 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Bicarbonate Alkalinity as CaCO3	309 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Carbonate Alkalinity as CaCO3	30 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Hardness, mg equivalent CaCO3/L	733 mg/L	SM2340-B	1	07/02/2008	14:16	SJ
Total Dissolved Solids	1417 mg/L	SM2540-C	30	06/19/2008	12:30	CM
Total Suspended Solids	29 mg/L	SM2540-D	5	06/19/2008	12:30	CM
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	06/18/2008	15:00	GF
рН	8.49 s. u.	SM4500-H	0.01	06/18/2008	12:28	CM
pH Temperature	19.30 °C	SM4500-H	0.01	06/18/2008	12:28	СМ
METALS BY ICP						
Calcium, Ca - Dissolved	94.27 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Iron, Fe - Total	0.24 mg/L	EPA 200.7	0.05	06/25/2008	19:07	CM

Respectfully submitted, SGS NORTH AMERICA INC.

Minerals Services Division

P.O. Box 1020, Huntington, UT 84528 t (435) 653-2311 (435) 653-2438

www.us.sgs.com/minerals

Member of the SGS Group



**SUNNYSIDE COGENERATION FAC** PO BOX 10

EAST CARBON UT 84520

JUL 25 2008

Page 2 of 2

Client Sample ID:

Date Received:

Date Sampled:

Jun 17, 2008 Jun 18, 2008

ICE-1

**Product Description:** 

**WATER** 

Sample ID By

Sample Taken At Sample Taken By

**Time Sampled** Time Received

Mine Site

Field - Flow Field - Conductivity

Field - Dis. Oxygen Field - Temperature

Field - pH

Sunnyside Cogeneration Assoc.

ICE-1

R.N. 08:50 10:30

27

12 **20 GPM** 

1941 UMHOS/CM

11.0 MG/L 13.2 DEG. C

8.38 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved AMMENDED U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-002

			REGULATORY	A	NALYZE	ED .
PARAMETER	RESULT	METHOD	LEVEL	DATE	TIME	ANALYST
METALS BY ICP (continued)	*					
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Magnesium, Mg - Dissolved	120.90 mg/L	EPA 200.7	0.01	06/24/2008	21:11	GF
Manganese, Mn - Total	0.005 mg/L	` EPA 200.7	0.002	06/25/2008	19:07	СМ
Manganese, Mn - Dissolved	<0.002 mg/L	EPA 200.7	0.002	06/24/2008	21:11	GF
Potassium, K - Dissolved	4.15 mg/L	EPA 200.7	0.14	06/24/2008	21:11	GF
Sodium, Na - Dissolved	205.42 mg/L	EPA 200.7	0.09	06/24/2008	21:11	GF

Respectfully submitted, SGS NORTH AMERICA INC.

Huntington Labo

SGS North America Inc.

Minerals Services Division

P.O. Box 1020, Huntington, UT 84528 t (435) 653-2311 (435) 653-2436



**SUNNYSIDE COGENERATION FAC** PO BOX 10 EAST CARBON UT 84520

Page 1 of 2

Client Sample ID:

Date Sampled: Date Received: Jun 17, 2008 Jun 18, 2008

**Product Description:** 

Well-1

WATER

Sample ID By

Sample Taken At Sample Taken By Time Sampled

Time Received

Mine Site

Field - Flow Field - Conductivity

Field - Dis. Oxygen Field - Temperature

Field - pH

Sunnyside Cogeneration Assoc.

WELL-1` R.N. 09:40

10:30 27

150 GPM

543 UMHOS/CM 11.0 MG/L

11.9 DEG. C 8.65 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved

AMMENDED ALKALINITY TOTAL AND U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-003

			REGULATORY	A	NALYZE	D
PARAMETER	RESULT	METHOD	<u>LEVEL</u>	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	06/25/2008	09:00	DI
Chloride, Cl	2 mg/L	EPA 300.0	1	06/24/2008	18:10	DI
Sulfate, SO4	67 mg/L	EPA 300.0	1	06/24/2008	18:10	DI
Anions	6.00 meg/L	SM1030	0	07/08/2008	12:40	SJ
Cations	6.40 meg/L	SM1030	0	07/08/2008	12:40	SJ
Balance	3.00 %	SM1030	-10	07/08/2008	12:40	SJ
Alkalinity, mg CaCO3/L (pH 4.5)	226 mg/L	SM2320-B	5	07/02/2008	15:30	GF
Bicarbonate Alkalinity as CaCO3	226 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Carbonate Alkalinity as CaCO3	<5 mg/L	SM2320-B	5	06/23/2008	11:30	СМ
Hardness, mg equivalent CaCO3/L	261 mg/L	SM2340-B	1	07/08/2008	12:40	SJ
Total Dissolved Solids	330 mg/L	SM2540-C	30	06/19/2008	12:30	СМ
Total Suspended Solids	21 mg/L	SM2540-D	5	06/19/2008	12:30	CM
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	06/18/2008	15:00	GF
pH	8.60 s. u.	SM4500-H	0.01	06/18/2008	12:28	CM
pH Temperature	19.30 °C	SM4500-H	0.01	06/18/2008	12:28	CM
METALS BY ICP						
Calcium, Ca - Dissolved	43.47 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Iron, Fe - Total	0.39 mg/L	EPA 200.7	0.05	06/25/2008	19:07	CM

Respectfully submitted, SES NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

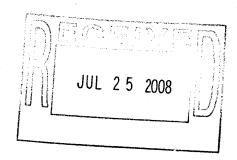
P.O. Box 1020, Huntington, UT 84528 t (435) 653-2311 f (43<del>5) 653-24</del>36



### SUNNYSIDE COGENERATION FAC

**PO BOX 10** 

EAST CARBON UT 84520



Page 2 of 2

Client Sample ID:

Date Sampled:

Date Received:

**Product Description:** 

Well-1

Jun 17, 2008 Jun 18, 2008

**WATER** 

Sample ID By

Sample Taken At

Sample Taken By **Time Sampled** 

Time Received

Mine Site

Field - Flow

Field - Conductivity Field - Dis. Oxygen

Field - Temperature

Field - pH

Sunnyside Cogeneration Assoc.

WELL-1`

R.N.

09:40

10:30

27

8

150 GPM

543 UMHOS/CM 11.0 MG/L

11.9 DEG. C

8.65 pH UNITS

Comments:

Dissolved Metals Filtered at Lab

pH Expired When Recieved

AMMENDED ALKALINITY TOTAL AND U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-003

	F		REGULATORY	ANALYZED		
<u>PARAMETER</u>	RESULT	<b>METHOD</b>	LEVEL	DATE	TIME	ANALYST
METALS BY ICP (continued)				-		
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Magnesium, Mg - Dissolved	36.91 mg/L	EPA 200.7	0.01	06/24/2008	21:11	GF
Manganese, Mn - Total	0.017 mg/L	EPA 200.7	0.002	06/25/2008	19:07	CM
Manganese, Mn - Dissolved	<0.002 mg/L	EPA 200.7	0.002	06/24/2008	21:11	GF
Potassium, K - Dissolved	1.08 mg/L	EPA 200.7	0.14	06/24/2008	21:11	GF
Sodium, Na - Dissolved	25.84 mg/L	EPA 200.7	0.09	06/24/2008	21:11	GF
	_0.0 ·g/L	LI / ( 200.)	0.00	00/2-1/2000	21.11	٥,

Respectfully submitted, S NORTH AMERICA INC.

Huntington Laboratory

SGS North America Inc.

Minerals Services Division

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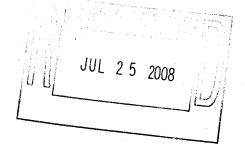
t (435) 653-2311

**~(**435) 65**3** 



**SUNNYSIDE COGENERATION FAC** PO BOX 10

EAST CARBON UT 84520



Page 1 of 2

Client Sample ID:

F-2

Date Sampled: Date Received: Jun 17, 2008 Jun 18, 2008

**Product Description:** 

WATER

Sample ID By

Sample Taken By

Sunnyside Cogeneration Assoc. Sample Taken At

F-2 R.N. 0920

Time Sampled Time Received Mine

10:30 27 11

Field - Flow

Site

100 GPM

Field - Conductivity

1941 UMHOS/CM 10.7 MG/L

Field - Dis. Oxygen Field - Temperature

11.5 DEG. C

Field - pH

8.4 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved AMMENDED U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-004

			REGULATORY	Α	NALYZE	D
PARAMETER	RESULT	<u>METHOD</u>	<u>LEVEL</u>	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	. 5	07/01/2008	09:15	DI
Chloride, Cl	43 mg/L	EPA 300.0	1	06/24/2008	18:10	DI
Sulfate, SO4	617 mg/L	EPA 300.0	1	06/24/2008	18:10	DI
Anions	21.50 meg/L	SM1030	0	07/02/2008	14:13	SJ
Cations	23.50 meg/L	SM1030	0	07/02/2008	14:15	SJ
Balance	4.40 %	SM1030	-10	07/02/2008	14:15	SJ
Alkalinity, mg CaCO3/L (pH 4.5)	373 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Bicarbonate Alkalinity as CaCO3	259 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Carbonate Alkalinity as CaCO3	114 mg/L	SM2320-B	5	06/23/2008	11:30	CM
Hardness, mg equivalent CaCO3/L	738 mg/L	SM2340-B	1	07/02/2008	14:16	SJ
Total Dissolved Solids	1440 mg/L	SM2540-C	30	06/23/2008	12:30	CM
Total Suspended Solids	19 mg/L	SM2540-D	5	06/23/2008	12:30	CM
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	06/18/2008	15:00	GF
pH	8.48 s. u.	SM4500-H	0.01	06/18/2008	12:28	CM
pH Temperature	19.10 °C	SM4500-H	0.01	06/18/2008	12:28	CM
METALS BY ICP						
Calcium, Ca - Dissolved	105.49 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Iron, Fe - Total	0.66 mg/L	EPA 200.7	0.05	06/25/2008	19:07	CM

espectfully submitted, S NORTH AMERICA INC.

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k (435) 653-2**48**6 www.us.sgs.com/minerals

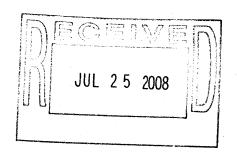
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### **SUNNYSIDE COGENERATION FAC**

PO BOX 10

EAST CARBON UT 84520



Page 2 of 2

Client Sample ID:

F-2

Date Sampled: Date Received: Jun 17, 2008 Jun 18, 2008

**Product Description:** 

WATER

Sample ID By

Sunnyside Cogeneration Assoc.

Sample Taken At F-2 Sample Taken By R.N. 0920 Time Sampled Time Received 10:30

27 Mine 11 Site

Field - Flow 100 GPM

Field - Conductivity **1941 UMHOS/CM** 10.7 MG/L

Field - Dis. Oxygen Field - Temperature Field - pH

11.5 DEG. C 8.4 pH UNITS

Comments:

Dissolved Metals Filtered at Lab pH Expired When Recieved

AMMENDED U.O.M. FOR SS

SGS Minerals Sample ID: 782-0800363-004

		REGULATORY		ANALYZED		ED
PARAMETER	RESULT	<b>METHOD</b>	<u>LEVEL</u>	DATE	TIME	<u>ANALYST</u>
METALS BY ICP (continued)						
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	06/24/2008	21:11	GF
Magnesium, Mg - Dissolved	115.25 mg/L	EPA 200.7	0.01	06/24/2008	21:11	GF
Manganese, Mn - Total	0.038 mg/L	EPA 200.7	0.002	06/25/2008	19:07	CM
Manganese, Mn - Dissolved	0.009 mg/L	EPA 200.7	0.002	06/24/2008	21:11	GF
Potassium, K - Dissolved	4.11 mg/L	EPA 200.7	0.14	06/24/2008	21:11	GF
Sodium, Na - Dissolved	199.35 mg/L	EPA 200.7	0.09	06/24/2008	21:11	GF

Respectfully submitted, GS NORTH AMERICA INC.

SGS North America Inc.

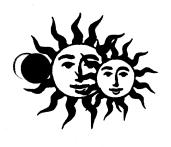
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### APPENDIX B-3 WATER MONITORING

### THIRD QUARTER



### **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

October 24, 2008

Darron Haddock Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

Subject: Quarterly Sampling Report

Monitoring Period: July, August, September 2008

DOGM Operational Water Monitoring

Dear Darron:

This letter is to confirm that the quarterly baseline water sampling data and the UPDES DMR data, have been submitted to the DOGM EDI web site. The data is correct and ready to be processed.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Michael J. Blake

Agent For

Sunnyside Cogeneration Associates

C.C. Steve Gross
William Rossiter
Maggie Estrada
Paul Shepard
Rusty Netz
Plant File

## Sunnyside Cogeneration Facility Sunnyside, Utah

## Field Parameter Data

DOGM Permit Boundry Water Quality Monitoring Plan Monitoring Period: Third Quarter 2008 Samples taken August 25, 2008

N.	Ž	<u> </u>	Š	NW	NN	B-6	Borehole B-6
4	181	6.3	1261	7.46	22.9	Well-1	Dragerton Well
2	30	6.4	7130	8.17	16.2	CRB	Coarse Refuse Seep Boundary
NA	Ą	AN	¥ Z	A A	AA	CRS	Coarse Refuse Seep Source
2	90	11	1716	8.54	14.6	F-2	Columbia Dugway Spring
2	15	10	2330	8.55	16.3	ICE-1	Icelander Creek
	(mdg)	(mg/l)	(soyun)	(sn)	0)	l.D.	Monitoring Location
method	Rate	Oxygen	SC	펍	Temp.	Location	
Flow	Flow	Dissolved				-	

### Notes:

na - no flow

NW- no water present

NW/F- no water present frozen

nd - data is not available due to lack of discharge

- 1- Flow rates were measured using a weir.
- 2 Flow rates were measured using a calibrated container and stopwatch method.
  - 3 Flow rates were measured using the floating debris method.
    - 4 Flow rates were measured using a meter



SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520



Page 1 of 2

Sunnyside Cogeneration Assoc.

Client Sample ID:

CRB

Date Sampled: Date Received: Aug 25, 2008

**Product Description:** 

Aug 26, 2008

**WATER** 

Sample ID By

Sample Taken At

CRB

Sample Taken By

Richard Safley 1100

Time Sampled Time Received Mine

1145 27

Site Field - Flow 9 **30 GPM** 

Field - Conductivity

7130 UMHOS/CM

Field - Dis. Oxygen Field - Temperature 6.4 MG/L 16.2 DEG. C

Field - pH

8.17 pH UNITS

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-004

			REGULATORY	A	NALYZEI	D
PARAMETER	RESULT	METHOD	LEVEL	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	09/04/2008	10:00:00	D A CM
Chloride, Cl	149 mg/L	EPA 300.0	1	08/28/2008	2:51:00	
Sulfate, SO4	4432 mg/L	EPA 300.0	1	09/02/2008	3:58:00	
Anions	103.80 meg/L	SM1030	0	09/15/2008	7:57:00	
Cations	99.20 meg/L	SM1030	0	09/15/2008	7:58:00	
Balance	-2.30 %	SM1030	-10	09/15/2008	7:58:00	
Alkalinity, mg CaCO3/L (pH 4.5)	369 mg/L	SM2320-B	5	08/28/2008	3:30:00	
Bicarbonate Alkalinity as CaCO3	369 mg/L	SM2320-B	5	08/28/2008	3:30:00	PN GF
Carbonate Alkalinity as CaCO3	<5 mg/L	SM2320-B	5	08/28/2008	3:30:00	PN GF
Hardness, mg equivalent CaCO3/L	2922 mg/L	SM2340-B	1	09/15/2008	7:59:00	
Total Dissolved Solids	7242 mg/L	SM2540-C	30	08/28/2008	4:15:00	
Total Suspended Solids	<5 mg/L	SM2540-D	5	08/28/2008	4:15:00	
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	08/26/2008	2:30:00	
рН	8.17 s. u.	SM4500-H	0.01	08/26/2008	15:50	GF
pH Temperature	19.20 °C	SM4500-H	0.01	08/26/2008	15:50	GF
METALS BY ICP						
Calcium, Ca - Dissolved	460.54 mg/L	EPA 200.7	0.03	09/05/2008	11:16:00	AGE
Iron, Fe - Total	<0.05 mg/L	EPA 200.7	0.05	08/28/2008	12:17:00	
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	09/05/2008	11:16	GF
Magnesium, Mg - Dissolved	430.24 mg/L	EPA 200.7	0.01	09/05/2008	11:16:00	
		Doonootfully automi	لدمنه			

Respectfully submitted, SOS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

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Page 2 of 2

### SUNNYSIDE COGENERATION FAC

PO BOX 10 EAST CARBON UT 84520

Client Sample ID:

CRB

Sample ID By

Sunnyside Cogeneration Assoc.

Date Sampled:

Aug 25, 2008 Aug 26, 2008 Sample Taken At

CRB

Date Received: Product Description:

**WATER** 

Sample Taken By Time Sampled

**Richard Safley** 

Time Received

1100 1145

Mine

27

Site

Field - Flow

**30 GPM** 

Field - Conductivity

7130 UMHOS/CM

Field - Dis. Oxygen Field - Temperature 6.4 MG/L

16.2 DEG. C

Field - pH

8.17 pH UNITS

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-004

			REGULATORY	ANALYZED		
PARAMETER	RESULT	<b>METHOD</b>	LEVEL	DATE	TIME ANALYST	
METALS BY ICP (continued)						
Manganese, Mn - Total	0.004 mg/L	EPA 200.7	0.002	08/28/2008	12:17:00 F DI	
Manganese, Mn - Dissolved	<0.002 mg/L	EPA 200.7	0.002	09/05/2008	11:16:00 A GF	
Potassium, K - Dissolved	47.94 mg/L	EPA 200.7	0.14	09/05/2008	11:16:00 A GF	
Sodium, Na - Dissolved	910.31 mg/L	EPA 200.7	0.09	09/11/2008	15:10 DI	

Respectfully submitted, S NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

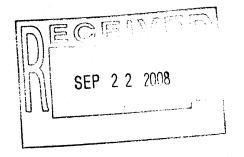
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SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520



Page 1 of 2

Client Sample ID:

**ICE** 

Date Sampled: Date Received:

Comments:

Aug 25, 2008 Aug 26, 2008

**Product Description:** 

WATER

Sample ID By

Sample Taken At

Sample Taken By

**Time Sampled** Time Received

Mine Site

Field - Flow

Field - Conductivity Field - Dis. Oxygen

Field - Temperature

Field - pH

Dissolved Metals Filtered at Lab, pH Expired When Received

Sunnyside Cogeneration Assoc.

ICE

Richard Safley

15 GPM **2330 UMHOS/CM** 

10 MG/L 16.3 DEG. C

8.55 pH UNITS

SGS Minerals Sample ID: 782-0800548-003

D.D			REGULATORY	EGULATORY ANALY		
PARAMETER	RESULT	METHOD	LEVEL	DATE	TIME ANALYST	
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	09/04/2008	10:00:00 A CM	
Chloride, Cl	53 mg/L	EPA 300.0	1	08/28/2008	2:51:00 PN DI	
Sulfate, SO4	887 mg/L	EPA 300.0	·	08/28/2008	2:51:00 PN DI	
Anions	29.10 meg/L	SM1030	Ö	09/15/2008	10:05 DI	
Cations	29.10 meq/L	SM1030	0	09/15/2008	10:05 DI	
Balance	0.00 %	SM1030	-10	09/15/2008	10:05 DI	
Alkalinity, mg CaCO3/L (pH 4.5)	458 mg/L	SM2320-B	5	08/28/2008	3:30:00 PN GF	
Bicarbonate Alkalinity as CaCO3	458 mg/L	SM2320-B	5	08/28/2008	3:30:00 PN GF	
Carbonate Alkalinity as CaCO3	<5 mg/L	SM2320-B	5	08/28/2008	3:30:00 PN GF	
Hardness, mg equivalent CaCO3/L	834 mg/L	SM2340-B	1	09/15/2008	10:05 DI	
Total Dissolved Solids	1804 mg/L	SM2540-C	30	08/28/2008	4:15:00 PN GF	
Total Suspended Solids	5 mg/L	SM2540-D	5	08/28/2008	4:15:00 PN GF	
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	08/26/2008	2:30:00 PN GF	
pH	8.49 s. u.	SM4500-H	0.01	08/26/2008	15:48 GF	
pH Temperature	19.40 °C	SM4500-H	0.01	08/26/2008	15:48 GF	
			0.01	00/20/2000	10.40	
METALS BY ICP						
Calcium, Ca - Dissolved	103.37 mg/L	EPA 200.7	0.03	09/05/2008	11:16:00 A GF	
Iron, Fe - Total	0.14 mg/L	EPA 200.7	0.05	08/28/2008	12:17:00 F DI	
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	09/05/2008	11:16:00 A GF	
Magnesium, Mg - Dissolved	139.85 mg/L	EPA 200.7	0.03	09/05/2008	11:16:00 A GF	
			0.01	00.00.2000	11.10.007 01	

Respectfully submitted, SGS NORTH AMERICA INC.

Huntington Labo

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Minerals Services Division

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Page 2 of 2

SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520

Client Sample ID:
Date Sampled:
Date Received:
Product Description:

**ICE** 

Aug 25, 2008 Aug 26, 2008

WATER

Sample ID By

Sample Taken At

Sunnyside Cogeneration Assoc. **ICE** 

Sample Taken By Richard Safley

Time Sampled 1100 Time Received 1145 Mine 27 12

Site Field - Flow **15 GPM** Field - Conductivity

Field - Dis. Oxygen Field - Temperature Field - pH

2330 UMHOS/CM 10 MG/L

16.3 DEG. C 8.55 pH UNITS

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-003

DADAMETED			REGULATORY	A	NALYZED
PARAMETER METALS BY ICP (continued)	RESULT	METHOD	LEVEL	DATE	TIME ANALYST
Manganese, Mn - Total Manganese, Mn - Dissolved Potassium, K - Dissolved Sodium, Na - Dissolved	0.023 mg/L 0.010 mg/L 8.02 mg/L 280.93 mg/L	EPA 200.7 EPA 200.7 EPA 200.7 EPA 200.7	0.002 0.002 0.14 0.09	08/28/2008 09/05/2008 09/05/2008 09/05/2008	12:17:00 F DI 11:16:00 A GF 11:16:00 A GF 11:16:00 A GF

pectfully submitted, NORTH/AMERICA INC.

SGS North America Inc. |

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SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520

Page 1 of 2

Client Sample ID:

Well 1

Date Sampled: Date Received: Aug 25, 2008

**Product Description:** 

Aug 26, 2008

**WATER** 

Sample ID By

Sunnyside Cogeneration Assoc. Sample Taken At

Well 1

Sample Taken By

**Richard Safley** 

**Time Sampled** Time Received 1100 1145

Mine Site

27

Field - Flow

181 GPM

Field - Conductivity

**1261 UMHOS/CM** 

Field - Dis. Oxygen Field - Temperature 6.3 MG/L

22.9 DEG. C

Field - pH

7.46 pH UNITS

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-001

			REGULATORY	A	NALYZE	:D
PARAMETER	RESULT	<u>METHOD</u>	LEVEL	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	09/04/2008	10:00:0	00 A CM
Chloride, Cl	25 mg/L	EPA 300.0	1	08/28/2008	2:51:00	PN DI
Sulfate, SO4	276 mg/L	EPA 300.0	1	08/28/2008	2:51:00	) PN DI
Anions	14.30 meg/L	SM1030	0	09/15/2008	7:57:00	L2 NA (
Cations	14.40 meg/L	SM1030	0	09/15/2008	7:58:00	LS IA
Balance	0.50 %	SM1030	-10	09/15/2008	7:58:00	LS NA
Alkalinity, mg CaCO3/L (pH 4.5)	393 mg/L	SM2320-B	5	08/28/2008	3:30:00	PN GF
Bicarbonate Alkalinity as CaCO3	393 mg/L	SM2320-B	5	08/28/2008	3:30:00	) PN GF
Carbonate Alkalinity as CaCO3	<5 mg/L	SM2320-B	5	08/28/2008	3:30:00	PN GF
Hardness, mg equivalent CaCO3/L	461 mg/L	SM2340-B	1	09/15/2008	7:59:00	AN SJ
Total Dissolved Solids	810 mg/L	SM2540-C	30	08/28/2008	4:15:00	) PN GF
Total Suspended Solids	5 mg/L	SM2540-D	5	08/28/2008	4:15:00	) PN GF
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	08/26/2008	2:30:00	) PN GF
pН	7.53 s. u.	SM4500-H	0.01	08/26/2008	15:43	GF
pH Temperature	19.30 °C	SM4500-H	0.01	08/26/2008	15:43	GF
METALS BY ICP						
Calcium, Ca - Dissolved	72.35 mg/L	EPA 200.7	0.03	09/05/2008	11:16:0	00 A GF
Iron, Fe - Total	0.08 mg/L	EPA 200.7	0.05	08/28/2008	12:17:0	0 F DI
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	09/05/2008	11:16:0	00 A GF
Magnesium, Mg - Dissolved	68.12 mg/L	EPA 200.7	0.01	09/05/2008	11:16:0	00 A GF

Respectfully submitted, GS NORTH AMERICA INC.

Huntington Laborat

SGS North America Inc. |

Minerals Services Division

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### **SUNNYSIDE COGENERATION FAC**

PO BOX 10

EAST CARBON UT 84520

Client Sample ID:	
Date Sampled:	

Well 1

Aug 25, 2008

Date Received: Product Description:

WATER

Aug 26, 2008

Sample ID By

Sunnyside Cogeneration Assoc. Well 1

Sample Taken At

**Richard Safley** Sample Taken By 1100 Time Sampled

1145 Time Received Mine 27 Site 8

181 GPM Field - Flow

Field - Conductivity 1261 UMHOS/CM

Field - Dis. Oxygen 6.3 MG/L 22.9 DEG. C Field - Temperature

Field - pH

7.46 pH UNITS

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-001

			REGULATORY	ANALYZED		
<u>PARAMETER</u>	RESULT	<b>METHOD</b>	<u>LEVEL</u>	DATE	TIME ANALYST	
METALS BY ICP (continued)						
Manganese, Mn - Total	0.018 mg/L	EPA 200.7	0.002	08/28/2008	12:17:00 F DI	
Manganese, Mn - Dissolved	0.018 mg/L	EPA 200.7	0.002	09/05/2008	11:16:00 A GF	
Potassium, K - Dissolved	2.67 mg/L	EPA 200.7	. 0.14	09/05/2008	11:16:00 A GF	
Sodium, Na - Dissolved	118.52 mg/L	EPA 200.7	0.09	09/05/2008	11:16:00 A GF	

Respectfully submitted, SAS NORTH AMERICA INC.

Huntington Laboratory

SGS North America Inc.

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**SUNNYSIDE COGENERATION FAC** PO BOX 10 EAST CARBON UT 84520

SEP 2 2 2008

Page 1 of 2

Sunnyside Cogeneration Assoc.

Client Sample ID:

F2

Date Sampled: Date Received: Aug 25, 2008

Product Description:

Aug 26, 2008

**WATER** 

Sample ID By

Sample Taken At

**Richard Safley** Sample Taken By 1100

**Time Sampled** 1145 Time Received 27 Mine Site 11

Field - Flow

Field - Conductivity

Field - Dis. Oxygen

11 MG/L Field - Temperature

Field - pH

14.6 DEG. C

**50 GPM** 

8.54 pH UNITS

1716 UMHOS/CM

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-002

			REGULATORY	ANALYZED		
PARAMETER	RESULT	METHOD	LEVEL	DATE	TIME	ANALYST
Oil and Grease, (HEM)	<5 mg/L	EPA 1664	5	09/04/2008	10:00:0	O A CM
Chloride, Cl	29 mg/L	EPA 300.0	1	08/28/2008	2:51:00	) PN DI
Sulfate, SO4	451 mg/L	EPA 300.0	1	08/28/2008	2:51:00	PN DI
Anions	20.00 meg/L	SM1030	0	09/15/2008	7:57:00	) AN SJ
Cations	19.70 meg/L	SM1030	0	09/15/2008	7:58:00	AN SJ
Balance	-0.70 %	SM1030	-10	09/15/2008	7:58:00	LS 1/A (
Alkalinity, mg CaCO3/L (pH 4.5)	490 mg/L	SM2320-B	5	08/28/2008	3:30:00	) PN GF
Bicarbonate Alkalinity as CaCO3	490 mg/L	SM2320-B	5	08/28/2008	3:30:00	PN GF
Carbonate Alkalinity as CaCO3	<5 mg/L	SM2320-B	5	08/28/2008	3:30:00	PN GF
Hardness, mg equivalent CaCO3/L	583 mg/L	SM2340-B	1	09/15/2008	7:59:00	AN SJ
Total Dissolved Solids	1164 mg/L	SM2540-C	30	08/28/2008	4:15:00	PN GF
Total Suspended Solids	<5 mg/L	SM2540-D	5	08/28/2008	4:15:00	) PN GF
Settleable Solids	<0.1 mL/L	SM2540-F a	0.1	08/26/2008	2:30:00	) PN GF
Hq	8.45 s. u.	SM4500-H	0.01	08/26/2008	15:45	GF
pH Temperature	19. <b>40</b> °C	SM4500-H	0.01	08/26/2008	15:45	GF
METALS BY ICP						
Calcium, Ca - Dissolved	79.82 mg/L	EPA 200.7	0.03	09/05/2008	11:16:0	00 A GF
Iron, Fe - Total	0.09 mg/L	EPA 200.7	0.05	08/28/2008	12:17:0	00 F DI
Iron, Fe - Dissolved	<0.03 mg/L	EPA 200.7	0.03	09/11/2008	15:10	GF
Magnesium, Mg - Dissolved	93.11 mg/L	EPA 200.7	0.01	09/05/2008	11:16:0	00 A GF

Respectfully submitted, GS NORTH AMERICA INC.

SGS North America Inc. 1

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Member of the SGS Group



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### SUNNYSIDE COGENERATION FAC

PO BOX 10 EAST CARBON UT 84520

Client Sample ID:

Date Sampled:

F2

Aug 25, 2008

Date Received: Product Description:

Aug 26, 2008

WATER

Sample ID By

Sample Taken At

Sample Taken By

Time Sampled

Time Received

Mine Site

Field - Flow

Field - Conductivity Field - Dis. Oxygen

Field - Temperature

Field - pH

Richard Safley

Sunnyside Cogeneration Assoc.

1100

F2

1145 27

11

50 GPM 1716 UMHOS/CM

11 MG/L

14.6 DEG. C

8.54 pH UNITS

Comments:

Dissolved Metals Filtered at Lab, pH Expired When Received

SGS Minerals Sample ID: 782-0800548-002

			REGULATORY	ANALYZED		
PARAMETER	RESULT	<u>METHOD</u>	LEVEL	DATE	TIME ANALYST	
METALS BY ICP (continued)						
Manganese, Mn - Total	0.013 mg/L	EPA 200.7	0.002	08/28/2008	12:17:00 F DI	
Manganese, Mn - Dissolved	0.008 mg/L	EPA 200.7	0.002	09/05/2008	11:16:00 A GF	
Potassium, K - Dissolved	2.87 mg/L	EPA 200.7	0.14	09/05/2008	11:16:00 A GF	
Sodium, Na - Dissolved	184.38 mg/L	EPA 200.7	0.09	09/05/2008	11:16:00 A GF	

Respectfully submitted, S NORTH AMERICA INC.

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### APPENDIX B-3 WATER MONITORING

### FOURTH QUARTER



### **Sunnyside Cogeneration Associates**

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

January 15, 2009

Darron Haddock Division of Oil, Gas & Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84116

Subject:

Quarterly Sampling Report

Monitoring Period: October, November, December 2008

DOGM Operational Water Monitoring

Dear Darron:

This letter is to confirm that the quarterly baseline water sampling data and the UPDES DMR data, have been submitted to the DOGM EDI web site. The data is correct and ready to be processed.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

Agent For

Sunnyside Cogeneration Associates

Blakey

c.c. Steve Gross
William Rossiter
Maggie Estrada
Paul Shepard
Rusty Netz
Plant File

## Sunnyside Cogeneration Facility Sunnyside, Utah

### Field Parameter Data

DOGM Permit Boundry Water Quality Monitoring Plan Monitoring Period: Fourth Quarter 2008 Samples taken November 19, 2008

					Dissolved	Flow	Flow
	Location	Temp.	표	သွ	Oxygen	Rate	method
Monitoring Location	I.D.	(C)	(ns)	(soumnos)	(mg/l)	(mdg)	
Icelander Creek	ICE-1	4.6	8.42	3520	11	20	2
Columbia Dugway Spring	F-2	6.2	8.63	1588	10.6	30	2
Coarse Refuse Seep Source	CRS	NA	NA	NA	NA	NA	N A
Coarse Refuse Seep Boundary	CRB	7	8.22	6710	9.6	50	8
Dragerton Well	Well-1	9.4	7.88	1204	8.7	160	4
Borehole B-6	B-6	N	NN	NN	NN	WN	Š

### Notes:

na - no flow

NW- no water present

NW/F- no water present frozen

nd - data is not available due to lack of discharge

- 1- Flow rates were measured using a weir.
- 2 Flow rates were measured using a calibrated container and stopwatch method.
  - 3 Flow rates were measured using the floating debris method.
    - 4 Flow rates were measured using a meter

### **Analysis Report**



### SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520

DEC - 8 2008

Page 1 of 2

Client Sample ID:

**CRB** 

Date Sampled:

Nov 19, 2008

Date Received: Product Description: Nov 20, 2008

**WATER** 

Sample ID By:

Sunnyside Cogeneration Assoc.

Sample Taken At:

Sample Taken By:

**CRB** Richard Safley

Time Sampled:

0815

Time Received:

1105 27

Mine: Site:

9

Field - pH:

8.22 pH UNITS

Field - Dis. Oxygen:

9.6 MG/L

Field - Flow:

**50 GPM** 

Field - Conductivity:

6710 UMHOS/CM

Field - Temperature:

7.0 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-001

<u>Tests</u>	Result	Unit	Method	REPORTING LIMIT	DATE	ANALYZEI TIME	O ANALYST
Hardness, mg equivalent CaCO3/L	2983	mg/L	SM2340-B	1.000	12/02/2008	3 15:05	SJ
Oil and Grease, (HEM)	<5	mg/L	EPA 1664	5.000	11/26/2008		CM
Anions	97.10	mea/L	SM1030	0.000	12/02/2008		SJ
Sulfate, SO4	4119	mg/L	EPA 300.0	1.000	11/21/2008		GF
Cations	101.90	meq/L	SM1030	0.000	12/02/2008	3 14:57	SJ
Balance	2.40	%	SM1030	-10.000	12/02/2008	3 15:05	SJ
рН	8.20	s. u.	SM4500-H	0.010	11/20/2008	3 12:52	GK
pH Temperature	16.40	°C	SM4500-H	0.010	11/20/2008	3 12:52	GK
Settleable Solids	<0.1	mL/L	SM2540-F a	0.100	11/20/2008	3 13:00	GF
Total Dissolved Solids	6971	mg/L	SM2540-C	30.000	11/24/2008	3 12:15	CM
Total Suspended Solids	5	mg/L	SM2540-D	5.000	11/24/2008	3 12:15	CM
Chloride, Cl	151	mg/L	EPA 300.0	1.000	11/20/2008	3 21:13	CM
Alkalinity, mg CaCO3/L (pH 4.5)	354	mg/L	SM2320-B	5.000	11/21/2008	3 14:00	GK
Carbonate Alkalinity as CaCO3	<5	mg/L	SM2320-B	5.000	11/21/2008	3 14:00	GK
Bicarbonate Alkalinity as CaCO3	354	mg/L	SM2320-B	5.000	11/21/2008	3 14:00	GK

Respectfully submitted, SGS NORTH AMERICA INC.

Huntington Laboratory

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Client Sample ID:

**CRB** 

SUNNYSIDE COGENERATION FAC

EAST CARBON UT 84520

Date Sampled: Date Received:

PO BOX 10

Nov 19, 2008

Product Description:

Nov 20, 2008

**WATER** 

Sample ID By:

Sample Taken At:

Sunnyside Cogeneration Assoc. **CRB** 

Sample Taken By:

Richard Safley

Time Sampled:

0815

Time Received: Mine:

1105 27

Site:

9

Field - pH:

8.22 pH UNITS

Field - Dis. Oxygen:

9.6 MG/L **50 GPM** 

Field - Flow: Field - Conductivity:

6710 UMHOS/CM

Field - Temperature:

7.0 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-001

				REPORT	TING A	NALYZE	ED
<u>Tests</u>	Result	Unit	Method	LIMIT	DATE	TIME	<b>ANALYST</b>
METALS BY ICP		<del></del>					
Calcium, Ca - Dissolved	475.36	mg/L	EPA 200.7	0.030	12/01/2008	17:54	GF
Iron, Fe - Total	< 0.05	mg/L	EPA 200.7	0.050	11/25/2008	20:25	CM
Iron, Fe - Dissolved	< 0.03	mg/L	EPA 200.7	0.030	11/25/2008	13:28	GF
Magnesium, Mg - Dissolved	436.11	mg/L	EPA 200.7	0.010	12/01/2008	17:54	СМ
Manganese, Mn - Total	0.012	mg/L	EPA 200.7	0.002	11/25/2008	20:25	СМ
Manganese, Mn - Dissolved	0.010	mg/L	EPA 200.7	0.002	11/25/2008	13:28	GF
Potassium, K - Dissolved	42.55	mg/L	EPA 200.7	0.140	11/25/2008	13:28	GF
Sodium, Na - Dissolved	947.90	mg/L	EPA 200.7	0.090	12/01/2008	17:54	CM

Respectfully submitted, SGS NORTH AMERICA INC.

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SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520

Client Sample ID:

**ICE** 

Date Sampled:

Nov 19, 2008

Date Received:

Nov 20, 2008

Product Description:

WATER

Sample ID By:

Sample Taken At:

Sunnyside Cogeneration Assoc.

Sample Taken By:

Richard Safley

Time Sampled: Time Received:

0900 \_1105

Mine:

27

Site:

12

Field - pH:

8.42 pH UNITS

Field - Dis. Oxygen:

11.0 MG/L

Field - Flow:

**20 GPM** 

Field - Conductivity: Field - Temperature: **3520 UMHOS/CM** 4.6 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-002

				REPORTI	NG A	ANALYZE	D
<u>Tests</u>	Result	<u>Unit</u>	<u>Method</u>	<u>LIMIT</u>	DATE	TIME	<u>ANALYST</u>
Hardness, mg equivalent CaCO3/L	1378	mg/L	SM2340-B	1.000	12/02/2008	3 15:05	SJ
Oil and Grease, (HEM)	<5	mg/L	EPA 1664	5.000	11/26/2008	3 09:00	CM
Anions	44.90	meq/L	SM1030	0.000	12/02/2008	3 14:56	SJ
Sulfate, SO4	1673	mg/L	EPA 300.0	1.000	11/20/202	21:13	CM
Cations	47.00	meq/L	SM1030	0.000	12/02/2008	3 14:57	SJ
Balance	2.20	%	SM1030	-10.000	12/02/2008	3 15:05	SJ
pН	8.20	s. u.	SM4500-H	0.010	11/20/2008	3 12:54	GK
pH Temperature	15.70	°C	SM4500-H	0.010	11/20/2008	3 12:54	GK
Settleable Solids	<0.1	mL/L	SM2540-F a	0.100	11/20/2008	3 13:00	GF
Total Dissolved Solids	3174	mg/L	SM2540-C	30.000	11/24/2008	3 12:15	CM
Total Suspended Solids	5	mg/L	SM2540-D	5.000	11/24/2008	3 12:15	CM
Chloride, Cl	. 72	mg/L	EPA 300.0	1.000	11/20/2008	3 21:13	CM
Alkalinity, mg CaCO3/L (pH 4.5)	405	mg/L	SM2320-B	5.000	11/21/2008	3 14:00	GK
Carbonate Alkalinity as CaCO3	<5	mg/L	SM2320-B	5.000	11/21/2008	3 14:00	GK
Bicarbonate Alkalinity as CaCO3	405	mg/L	SM2320-B	5.000	11/21/2008	3 14:00	GK

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc.

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Sunnyside Cogeneration Assoc.

SUNNYSIDE COGENERATION FAC PO BOX 10

EAST CARBON UT 84520

Client Sample ID:

**ICE** 

Date Sampled:

Nov 19, 2008

Date Received: Product Description: Nov 20, 2008

WATER

Sample ID By:

Sample Taken At:

Sample Taken By:

Richard Safley

Time Sampled: Time Received: 0900 1105

**ICE** 

Mine: Site:

27 12

Field - pH:

8.42 pH UNITS

Field - Dis. Oxygen:

11.0 MG/L

Field - Flow:

20 GPM

Field - Conductivity:

**3520 UMHOS/CM** 

Field - Temperature:

4.6 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-002

				REPORT	ING A	NALYZE	D
<u>Tests</u>	Result	<u>Unit</u>	<u>Method</u>	LIMIT	DATE	TIME	<b>ANALYST</b>
METALS BY ICP							
Calcium, Ca - Dissolved	190.50	mg/L	EPA 200.7	0.030	12/01/2008	17:54	CM
Iron, Fe - Total	0.12	mg/L	EPA 200.7	0.050	11/25/2008	20:25	CM
Iron, Fe - Dissolved	< 0.03	mg/L	EPA 200.7	0.030	11/25/2008	13:28	GF
Magnesium, Mg - Dissolved	219.15	mg/L	EPA 200.7	0.010	12/01/2008	17:54	CM
Manganese, Mn - Total	0.012	mg/L	EPA 200.7	0.002	11/25/2008	20:25	СМ
Manganese, Mn - Dissolved	0.010	mg/L	EPA 200.7	0.002	11/25/2008	13:28	GF
Potassium, K - Dissolved	14.51	mg/L	EPA 200.7	0.140	11/25/2008	13:28	GF
Sodium, Na - Dissolved	438.08	mg/L	EPA 200.7	0.090	12/01/2008	17:54	CM

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc.

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SUNNYSIDE COGENERATION FAC

PO BOX 10 EAST CARBON UT 84520

Client Sample ID:

Date Sampled: Date Received: Nov 19, 2008 Nov 20, 2008

**Product Description:** 

**WATER** 

Sample ID By:

Sunnyside Cogeneration Assoc.

Sample Taken At:

Sample Taken By:

Richard Safley

Time Sampled: Time Received: 0925 1105

Mine: Site:

27 11

Field - pH:

8.63 pH UNITS

Field - Dis. Oxygen:

10.6 MG/L

Field - Flow:

**30 GPM** 

Field - Conductivity: Field - Temperature: 1588 UMHOS/CM

6.2 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-003

		•				
			REPORTI	NG A	ANALYZE	D
Result	<u>Unit</u>	Method	<u>LIMIT</u>	DATE	TIME	<u>ANALYST</u>
607	mg/L	SM2340-B	1.000	12/02/2008	3 15:05	SJ
<5	mg/L	EPA 1664	5.000	11/26/2008	3 09:00	СМ
19.40	meq/L	SM1030	0.000	12/02/2008	3 14:56	SJ
430	mg/Ĺ	EPA 300.0	1.000	11/20/202	21:13	CM
20.10	meq/L	SM1030	0.000	12/02/2008	3 14:57	SJ
1,90	%	SM1030	-10.000	12/02/2008	3 15:05	SJ
8.43	s. u.	SM4500-H	0.010	11/20/2008	3 12:55	GK
15.40	°C	SM4500-H	0.010	11/20/2008	12:55	GK
< 0.1	mL/L	SM2540-F a	0.100	11/20/2008	3 13:00	GF
1175	mg/L	SM2540-C	30.000	11/24/2008	3 12:15	CM
12	mg/L	SM2540-D	5.000	11/24/2008	12:15	CM
28	mg/L	EPA 300.0	1.000	11/20/2008	3 21:13	CM
484	mg/L	SM2320-B	5.000	11/21/2008	14:00	GK
18	mg/L	SM2320-B	5.000	11/21/2008	14:00	GK
465	mg/L	SM2320-B	5.000	11/21/2008	14:00	GK
	607 <5 19.40 430 20.10 1.90 8.43 15.40 <0.1 1175 12 28 484 18	607 mg/L <5 mg/L 19.40 meq/L 430 mg/L 20.10 meq/L 1.90 % 8.43 s. u. 15.40 °C <0.1 mL/L 1175 mg/L 12 mg/L 28 mg/L 484 mg/L 18 mg/L	607 mg/L SM2340-B <5 mg/L EPA 1664 19.40 meq/L SM1030 430 mg/L EPA 300.0 20.10 meq/L SM1030 1.90 % SM1030 8.43 s. u. SM4500-H 15.40 °C SM4500-H <0.1 mL/L SM2540-F a 1175 mg/L SM2540-C 12 mg/L SM2540-D 28 mg/L EPA 300.0 484 mg/L SM2320-B 18 mg/L SM2320-B	Result         Unit         Method         LIMIT           607         mg/L         SM2340-B         1.000           <5	Result         Unit         Method         LIMIT         DATE           607         mg/L         SM2340-B         1.000         12/02/2008           <5	Result         Unit         Method         LIMIT         DATE         TIME           607         mg/L         SM2340-B         1.000         12/02/2008         15:05           <5

Respectfully submitted, SGS NORTH AMERICA INC.

Huntington Laborator

SGS North America Inc.

Minerals Services Division

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DEC 8 2008

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**SUNNYSIDE COGENERATION FAC** 

PO BOX 10 EAST CARBON UT 84520

Client Sample ID:

F2

Date Sampled: Date Received: Nov 19, 2008

Product Description:

Nov 20, 2008

**WATER** 

Sample ID By:

Sample Taken At:

Sunnyside Cogeneration Assoc.

Sample Taken By: Time Sampled:

Richard Safley 0925

Time Received:

1105

Mine: Site:

27 11

Field - pH:

8.63 pH UNITS

Field - Dis. Oxygen:

10.6 MG/L

Field - Flow: Field - Conductivity: 30 GPM **1588 UMHOS/CM** 

Field - Temperature:

6.2 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-003

				REPORT	TING	<b>ANALYZE</b>	D
<u>Tests</u>	Result	Unit	Method	LIMIT	DATE	TIME	<b>ANALYST</b>
METALS BY ICP							
Calcium, Ca - Dissolved	82.53	mg/L	EPA 200.7	0.030	11/25/200	08 13:28	GF
Iron, Fe - Total	0.54	mg/L	EPA 200.7	0.050	11/25/200	08 20:25	CM
Iron, Fe - Dissolved	< 0.03	mg/L	EPA 200.7	0.030	11/25/200	08 13:28	GF
Magnesium, Mg - Dissolved	97.40	mg/L	EPA 200.7	0.010	11/25/200	08 13:28	GF
Manganese, Mn - Total	0.031	mg/L	EPA 200.7	0.002	11/25/200	08 20:25	CM
Manganese, Mn - Dissolved	0.012	mg/L	EPA 200.7	0.002	11/25/200	08 13:28	GF
Potassium, K - Dissolved	3.03	mg/L	EPA 200.7	0.140	11/25/200	08 13:28	GF
Sodium, Na - Dissolved	182.08	mg/L	EPA 200.7	0.090	12/01/200	08 17:54	CM

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

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F-465





SUNNYSIDE COGENERATION FAC

PO BOX 10

EAST CARBON UT 84520

DEC

Page 1 of 2

Client Sample ID:

Well 1

Date Sampled:

Nov 19, 2008

Date Received:

Nov 20, 2008

Product Description:

**WATER** 

Sample ID By:

Sample Taken At:

Sunnyside Cogeneration Assoc. Well 1

Sample Taken By:

Richard Safley

Time Sampled:

0945

Time Received:

1105

Mine: Site:

27 8

Field - pH:

7.88 pH UNITS

Field - Dis. Oxygen:

8.7 MG/L

Field - Flow:

160 GPM

Field - Conductivity:

1204 UMHOS/CM

Field - Temperature:

9.4 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-004

Tests	Result	<u>Unit</u>	<u>Method</u>	REPORTII	NG <u>DATE</u>	ANALYZE <u>TIME</u>	D ANALYST
Hardness, mg equivalent CaCO3/L	463	mg/L	SM2340-B	1.000	12/02/200	08 15:05	SJ
Oil and Grease, (HEM)	<5	mg/L	EPA 1664	5.000	11/26/200	09:00	CM
Anions	19.40	meq/L	SM1030	0.000	12/02/200	)8 14:56	SJ
Sulfate, SO4	248	mg/Ĺ	EPA 300.0	1.000	11/20/202	21 21:13	CM
Cations	20.10	meq/L	SM1030	0.000	12/02/200	08 14:57	SJ
Balance	2.50	%	SM1030	-10.000	12/02/200	08 15:05	SJ
pH	7.71	s. u.	SM4500-H	0.010	11/20/200	08 12:57	GK
pH Temperature	15.60	°C	SM4500-H	0.010	11/20/200	08 12:57	GK
Settleable Solids	<0.1	mL/L	SM2540-F a	0.100	11/20/200	08 13:00	GF
Total Dissolved Solids	824	mg/L	SM2540-C	30.000	11/24/200	8 12:15	CM
Total Suspended Solids	11	mg/L	SM2540-D	5.000	11/24/200	08 12:15	CM
Chloride, Cl	20	mg/L	EPA 300.0	1.000	11/20/200	8 21:13	CM
Alkalinity, mg CaCO3/L (pH 4.5)	403	mg/L	SM2320-B	5.000	11/21/200	8 14:00	GK
Carbonate Alkalinity as CaCO3	<5	mg/L	SM2320-B	5.000	11/21/200	8 14:00	GK
Bicarbonate Alkalinity as CaCO3	403	mg/L	SM2320-B	5.000	11/21/200	8 14:00	GK

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

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SUNNYSIDE COGENERATION FAC

**PO BOX 10** 

EAST CARBON UT 84520

Page 2 of 2

Client Sample ID:

Well 1

Date Sampled:

Nov 19, 2008

Date Received:

Product Description:

Nov 20, 2008

**WATER** 

Sample ID By:

Sunnyside Cogeneration Assoc.

Sample Taken At:

Well 1

Sample Taken By:

Richard Safley

Time Sampled: Time Received: 0945

Mine:

1105

Site:

27 8

Field - pH:

7.88 pH UNITS

Field - Dis. Oxygen:

8.7 MG/L

Field - Flow:

160 GPM

Field - Conductivity:

1204 UMHOS/CM

Field - Temperature:

9.4 DEG. C

Comments:

pH expired when received

SGS Minerals Sample ID: 782-0800766-004

				REPORT	ING A	NALYZE	D
Tests	Result	Unit	Method	LIMIT	DATE	TIME	<b>ANALYST</b>
METALS BY ICP							
Calcium, Ca - Dissolved	73.67	mg/L	EPA 200.7	0.030	11/25/2008	13:28	GF
Iron, Fe - Total	0.47	mg/L	EPA 200.7	0.050	11/25/2008	20:25	CM
Iron, Fe - Dissolved	< 0.03	mg/L	EPA 200.7	0.030	11/25/2008	13:28	GF
Magnesium, Mg - Dissolved	67.65	mg/L	EPA 200.7	0.010	11/25/2008	13:28	GF
Manganese, Mn - Total	0.005	mg/L	EPA 200.7	0.002	11/25/2008	20:25	CM
Manganese, Mn - Dissolved	0.002	mg/L	EPA 200.7	0.002	11/25/2008	13:28	GF
Potassium, K - Dissolved	2.92	mg/L	EPA 200.7	0.140	11/25/2008	13:28	GF
Sodium, Na - Dissolved	118.11	mg/L	EPA 200.7	0.090	11/25/2008	13:28	GF

Respectfully submitted, SGS NORTH AMERICA INC.

SGS North America Inc.

Minerals Services Division

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### APPENDIX B-4 2003-2008 WATER QUALITY SUMMARY

### **SCA Report**

Water Quality Monitoring Report Monitoring Period: March 2003 – November 2008

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### **EXECUTIVE SUMMARY**

SCA collected the required water quality samples and field parameter data during the monitoring period of March 2003 through November 2008 in accordance with the program outlined in Appendix 7-8 of the Mining and Reclamation Permit. This monitoring plan included quarterly collection of water quality samples and field parameter data. SCA also periodically analyzed the water samples for an extended list of parameters to compare with the additional baseline monitoring list identified in the permit. The six locations monitored include:

Icelander Creek (ICE-1)Coarse Refuse Seep Boundary (CRB)Columbia Dugway Spring (F-2)Dragerton Well (Well-1)Coarse Refuse Seep Source (CRS)Borehole B-6 (B-6)

Water quality data from this monitoring period was compared with the 1993-1995 baseline data (see Appendix 7-4 of the MRP for the baseline data summary). It was also compared with the 1996-2002 water monitoring data summarized in the 2002 report (see Appendix 7-10 of the MRP for a copy of this report).

This report consists of a summary and interpretation of the water quality monitoring data and a comparison of the water quality parameters of each location with the prior data gathered. The following evaluations of the monitoring data were made:

- Two of the monitoring locations (Borehole B-6 and Coarse Refuse Seep CRS) did not have water discharges available for sampling during the entire monitoring period.
- Individual water quality parameters (field and laboratory data) were analyzed for each monitoring location. The variations in data appeared similar to those encountered during 1993-1995 baseline monitoring period and the 1996-2002 operational period. No new trends were identified which would indicate a change in water quality.
- Stiff diagrams were prepared for each monitoring session at each location. These were compared with stiff diagrams prepared for the baseline data. These diagrams identifying chemistry types appear generally similar with no changes being identified that would represent detrimental impacts to the water quality in the area.

The SCA mining operations do not have any discharges to surface waters (other than the rare potential for an occasional detention pond release that is controlled by UPDES requirements). There are no contaminating groundwater interactions. The extensive monitoring that has been conducted by SCA over the past fifteen years indicates that the operations of SCA have had positive improvements to water quality in the area. Slurry water is no longer filtering through the refuse pile as in the historic SCC operations. Water is no longer found in borehole B-6 or emanating from the seep at the base of the refuse pile. No detrimental water quality changes have been detected. Therefore, it would seem appropriate for SCA to petition the Division for a reduction in the frequency of sampling and/or in the number of parameters analyzed.

### **DATA ANALYSIS**

The quarterly field-parameter data collected by SCA during the monitoring period is presented in Table 1. This includes quarterly water quality samples from March 2003 through November 2008, which were then sent to Utah certified laboratories. The analytical laboratory results of the water samples taken by SCA are summarized in Table 2.

Statistical analysis of the data collected by SCA is itemized together with the data lists in the above noted tables. The statistical parameters include minimum, average, standard deviation, and the total number of samples analyzed.

### Field Data

The field parameter data as well as the laboratory results identify noticeable characteristics in the different types of water parameters. Figures 1 through 5 are graphs that compare the temperature, specific conductivity, dissolved oxygen and total dissolved solids of each of the monitoring sites over the monitoring period of 2003-2008. The following observations can be made from the graphs:

- The flow rates are generally down from the averages encountered during the 1993-1995 Baseline period and the 1996-2002 Operational period.
- The temperatures are similar to that of the 1993-1995 Baseline data and the 1996-2002 monitoring and are consistent with the seasonal temperatures;
- The average dissolved oxygen readings of the monitoring sites are within a half of the standard deviation from the Baseline and are similar to the 1996-2002 Operational period.
- The Specific Conductivity of the monitoring sites is very comparable to the Baseline data. Two sites (Ice-1 and CRB) were about 10% higher than the Operational period. These elevated values of specific conductivity (and total dissolved solids) may be the result of water percolating through the Mancos Shale and a 20% reduction in flows at those sites.
- The pH measured at the monitoring sites has remained consistent with the Baseline data and the Operational period. All of the pH measurements taken by SCA were in the range of 7.34 to 8.75.

### **Analytical Data**

To facilitate the evaluation of different water chemistry types present and to look for any changes in water chemistry at each location over time, the major ion data for the quarterly sampling by SCA were plotted on Stiff diagrams. The Stiff diagram plots are included as Figures 6 through 9.

A review of the Stiff plots shows water quality shapes similar to that previously identified which indicates two distinct groupings of water chemistry noted by the following characteristics:

- The Icelander Creek (ICE-1), Columbia Dugway Spring (F-2), and the Dragerton Well (WELL-1) seem to have similar water chemistry. They have a balanced chemistry of Sodium and Sulfate and moderate amounts of Magnesium, consistent with the 1993-1995 Baseline and 1996-2002 Operational Stiff diagrams.
- The samples taken from the Coarse Refuse Seep Boundary (CRB) again contain water rich in sulfate, magnesium, and calcium. This is also similar to the 1993-1995 Baseline and 1996-2002 Operational Stiff diagrams.
- Although the Icelander Creek is a surface water location, its two main inflows of water come from F-2 and CRB. Even though the CRB water contains elevated levels, it does not appear to adversely change the ICE-1 water quality in comparison with F-2 and Well-1.

	Date	Temp ( C)	pH (su)	SC (umhos)	Dissolved Oxygen (mgl)	Flow Rate
Icelander Creek						
ICE-1	3/11/2003	NW/F	NW/F	NW/F	NW/F	NW/F
	6/11/2003	NW/F	NW/F	NW/F	NW/F	NW/F
	9/9/2003	NW/F	NW/F	NW/F	NW/F	NW/F
	11/18/2003	NW/F	NW/F	NW/F	NW/F	NW/F
	3/30/2004		8.12	1857	8.83	2
	6/28/2004	NW	NW	NW	NW	NW
	9/13/2004	NW	NW	NW	NW	NW
	11/30/2004	NW	NW	NW	NW	NW
	3/14/2005	NW	NW	NW	NW	NW
	6/14/2005	16.8	7.81	2310	7.9	2
	9/9/2005	17.1	8.37	1765	8.25	30
	11/14/2005	7.7	8.61	1529	9.7	50
Flow measurement by	3/30/2006	7.5	8.3	1601	8.2	20
calibrated container	6/13/2006		8.75	1780	9.1	60
and stopwatch	9/25/2006	8.6	8.59	1551	6.6	50
	11/30/2006	3.1	8.6	1605	6.8	15
NA = no flow	3/21/2007	5.7	8.39	1514	10	8
NW = No Water	6/6/2007	NW	NW	NW	NW	NW
NW/F = No Water / Frozen	9/27/2007	NW	NW	NW	NW	NW
	11/26/2007	NW	NW	NW	NW	NW
	3/19/2008	NA	NA	NA	NA	NA
	6/17/2008	13.2	8.38	1941	11	20
	8/25/2008	16.3	8.55	2330	10	15
	11/19/2008	4.6	8.42	3520	11	20
			7.04	4844		
	Minimum		7.81	1514	6.6	0
	Average		8.41	1942	8.95	12.17
	Maximum	• • •	9	3520	11	60
	Standard Deviation		0.25	570	1.46	18.26
	Number of Samples	12	12	12	12	24

Monitoring Location Columbia Dugway	Date V Spring	Temp ( C)	pH (su)	SC (umhos)	Dissolved Oxygen (mgl)	Flow Rate (gpm)
F-2	3/11/2003	5.6	8.37	1578	8.3	15
	6/11/2003	13.8	8.23	1632	8	10
	9/9/2003	12.3	8.4	2500	7.8	3
	11/18/2003	12.6	8.2	2190	7.9	25
	3/30/2004	6.7	8.3	1829	9.8	30
	6/28/2004	13.4	8.08	1839	7.9	4
	9/13/2004	14.4	7.98	1985	8.6	2
	11/30/2004	1	8.7	1720	9.61	5
	3/14/2005	10.1	7.52	1140	8.2	25
	6/14/2005	16.4	8.05	2005	8.1	75
	9/9/2005	15.5	8.31	1625	8.1	60
	11/14/2005	9.1	8.58	1489	9	55
Flow measurement by	3/30/2006	4.9	8.56	1590	8.7	55
calibrated container	6/13/2006	12.3	7.95	1150	7.9	70
and stopwatch	9/25/2006	11	8.42	1601	9.5	65
	11/30/2006	7.1	8.56	1705	9.1	25
	3/21/2007	6.3	8.47	1564	10.8	10
	6/6/2007	11.5	8.38	1659	8.7	7
	9/27/2007	9.5	8.37	1951	8.2	10
	11/26/2007	1.7	8.32	1714	7	6
	3/19/2008	1.1	8.33	1746	11	25
	6/17/2008	11.5	8.4	1941	10.7	100
	8/25/2008	14.6	8.54	1716	11	50
	11/19/2008	6.2	8.63	1588	10.6	30
	Minimum	1.0	7.52	1140	7.0	2
	Average	9.5	8.32	1727	8.9	32
	Maximum	16.4	8.70	2500	11.0	100
	Standard Deviation	4.6	0.26	290	1.2	28
	Number of Samples	24	24	24	24	24

	Date	Temp ( C)	pH (su)	SC (umhos)	Dissolved Oxygen (mgl)	Flow Rate (gpm)
Coarse Refuse Se	ep Source					
CRS	3/11/2003	NA	NA	NA	NA	NA
	6/11/2003	NA	NA	NA	NA.	NA.
	9/9/2003	NA.	NA NA	NA	NA.	NA.
	11/18/2003	NA	NA	NA	NA NA	NA.
	3/30/2004	NA	NA.	NA.	NA.	NA.
	6/28/2004	NA	NA	NA.	NA	NA.
	9/13/2004	NA	NA	NA.	NA.	NA.
	11/30/2004	NA	NA	NA	NA	NA NA
	3/14/2005	NA	NA	NA	NA.	NA.
	6/14/2005	NA	NA	NA	NA.	NA NA
	9/9/2005	NA	NA	NA.	NA	NA NA
	11/14/2005	NA	NA	NA	NA	NA
	3/30/2006	NA	NA	NA	NA	NA
	6/13/2006	NA	NA	NA	NA	NA
	9/25/2006	NA	NA	NA	NA	NA
	11/30/2006	NA	NA	NA	NA	NA
NA = no flow	3/21/2007	NA	NA	NA	NA	NA
	6/6/2007	NA	NA	NA	NA	NA
	9/27/2007	NA	NA	NA	NA	NA
	11/26/2007	NA	NA	NA	NA	NA
	3/19/2008	NA	NA	NA	NA	NA
	6/17/2008	NA	NA	NA	NA	NA
	8/25/2008	NA	NA	NA	NA	NA
	11/19/2008	NA	NA	NA	NA	NA

					Disaskad	
				00	Dissolved	Flore Data
Monitoring Location	Data	Town (C)	nH (nu)	SC (www.bas)	Oxygen	Flow Rate
	Date	Temp (C)	pH (su)	(umhos)	(mgl)	(gpm)
Coarse Refuse Se	ep Boundary					
CRB	3/11/2003	6.7	8.17	4770	8.5	10
	6/11/2003	15.6	8.07	4980	7.8	5
	9/9/2003	13.2	8.6	5560	7.5	4
	11/18/2003	12.1	8.5	5610	8	15
	3/30/2004	6.2	7.65	4950	8.97	15
	6/28/2004	13.1	7.52	5020	8.1	8
	9/13/2004	14	7.51	5410	8.3	8
	11/30/2004	NW	NW	NW	NW	NW
	3/14/2005	9.9	7.98	4850	8.3	15
	6/14/2005	15	7.82	5020	8.1	35
	9/9/2005	15.3	7.99	5260	7.9	25
	11/14/2005	7.8	8.02	4870	8.15	45
Flow measurement by	3/30/2006	4.7	7.67	6730	9.2	35
calibrated container	6/13/2006	13.3	7.43	4980	8.1	15
and stopwatch	9/25/2006	9.4	8.07	5310	9.3	20
	11/30/2006	9.4	NA	NA	NA	NA
NA = no flow	3/21/2007	8	7.72	5690	6.4	5
NW = No Water	6/6/2007	12.6	8.04	5270	7.8	5
	9/27/2007	7.7	8.19	4870	8.6	6
	11/26/2007	2.8	8.07	4540	8	4
	3/19/2008	1.2	8.13	5520	11	20
	6/17/2008	13.6	8.06	6190	5.9	20
	8/25/2008	16.2	8.17	7130	6.4	30
	11/19/2008	7	8.22	6710	9.6	50
	Minimum	1.2	7.43	4540	5.9	0
	Average	10.2	7.98	5420	8.2	16
	Maximum	16.2	8.60	7130	11.0	50
	Standard Deviation	4.3	0.30	695	1.1	14
	Number of Samples	23	22	22	22	24

				<u> </u>		
Monitoring Location	Date	Temp ( C)	pH (su)	SC (umhos)	Dissolved Oxygen (mgl)	Flow Rate (gpm)
<b>Dragerton Well</b>						
Well-1	3/11/2003	9.1	7.55	1391	8.1	150
	6/11/2003		7.54	1434	8.1	125
	9/9/2003		NW/F	NW/F	NW/F	NW/F
	11/18/2003		NW/F	NW/F	NW/F	NW/F
·	3/30/2004	11.1	8.27	1011	8.32	0
	6/28/2004	NW	NW	NW	NW	NW
	9/13/2004	NW	NW	NW	NW	NW
	11/30/2004	6.1	7.81	1108	9.1	200
	3/14/2005		NW	NW	NW	NW
	6/14/2005		8.47	524	8.12	250
	9/9/2005		7.78	1146	8.2	250
	11/14/2005		7.98	1124	9.2	250
Flow measurement by	3/30/2006		7.72	1438	8.3	250
meter	6/13/2006		7.89	690	8.1	250
	9/25/2006		7.34	1269	6.4	200
	11/30/2006		7.45	1255	6.8	200
NA = no flow	3/21/2007		7. <del>43</del> 7.67	1324	7.7	250
NW = No Water	6/6/2007		7.62	1314	6.5	250
NW/F = No Water / Frozen	9/27/2007		7.74	1339	8.9	250
	11/26/2007		7.48	1198	6.9	250
	3/19/2008		NA	NA.	NA.	NA.
	6/17/2008		8.65	543	11	150
	8/25/2008		7.46	1261	6.3	181
	11/19/2008		7.88	1204	8.7	160
	1111012000	0.4	7.00	1201		
	Minimum	5.9	7.34	524	6.3	0
	Average		7.79	1143	8.0	151
	Maximum	22.9	8.65	1438	11.0	250
	Standard Deviation	4.5	0.36	282	1.2	106
	Number of Samples		18	18	18	24

Monitoring Location	Date	Temp ( C)	pH (su)	SC (umhos)	Dissolved Oxygen (mgl)	Flow Rate (gpm)
Borehole B-6						
B-6	3/11/2003	NW	NW	NW	NW	NW
	6/11/2003	NW	NW	NW	NW	NW
	9/9/2003	NW	NW	NW	NW	NW
	11/18/2003	NW	NW	NW	NW	NW
	3/30/2004	NW	NW	NW	NW	NW
	6/28/2004	NW	NW	NW	NW	NW
	9/13/2004	NW	NW	NW	NW	NW
	11/30/2004	NW	NW	NW	NW	NW
	3/14/2005	NW	NW	NW	NW	NW
	6/14/2005	NW	NW	NW	NW	NW
	9/9/2005	NW	NW	NW	NW	NW
	11/14/2005	NW	NW	NW	NW	NW
	3/30/2006	NW	NW	NW	NW	NW
	6/13/2006	NW	NW	NW	NW	NW
	9/25/2006	NW	NW	NW	NW	NW
	11/30/2006	NW	NW	NW	NW	NW
	3/21/2007	NW	NW	NW	NW	NW
NW = No Water	6/6/2007	NW	NW	NW	NW	NW
	9/27/2007	NW	NW	NW	NW	NW
	11/26/2007	NW	NW	NW	NW	NW
	3/19/2008	NW	NW	NW	NW	NW
	6/17/2008		NW	NW	NW	NW
	8/25/2008		NW	NW	NW	NW
	11/19/2008		NW	NW	NW	NW

# SCA - SUNNYSIDE REFUSE AND SLURRY MINE

Analytical Parameter Data 2003 - 2008

DOGM Permit Boundary Water Quality Monitoring

•							•												
		Alkalinity	Alkalinity	•	Alkalinity							;			:	1			Cartlon
	Acidity	Bicarbonate	Bicarbonate	<b>as</b> CO3 or	Total as	Chloride	Suffete	Calcium Total	_ 7	Handness Total CaCO3	Magneslum	Magnesium Dissolved	_	Potassium Dissolved	Sodium Dissolved	Sodium	Cations	Anions	Anton Balance
Date	(£003)	(Mg/l)	(mg/l)	(Jou)		(Mg/l)	Spm)	(v6m)	,	(mg/l)	Total (mg/l)	(mg/l)	•		(Mg/l)	(mg/l)	(meq/l)	(meq/)	*
3/30/2004			534	< 5 < 5	438	43	651			888		114		3.33	202		22.8	23.5	1.5
6/14/2005		419		v 2	419	29	1034	•	145.00	951		143.00		9.39	273.00	,	31.1	31.5	9.0
9/8/2005		457		17	474	5	486		75.10	603		101.00		5.89	222.00		21.9	20.9	2.3
11/14/2005	v 2	407		æ	445	౭	410	72.20	72.20	565	93.40	93.40	4.47	4.47	196.00	196.00	19.9	18.3	4.3
3/30/2006	v 22	418		۸ ئ	418	4	8		63.90	501		82.9		3.99	173.00		17.6	17.8	9. 9
6/13/2006	\ V	421		v 2	421	35	405	68.3	68.90	548	- 91.20	91.20	3.8 <u>4</u>	3.8 <b>4</b>	166	166.00	18.3	17.7	1.6
9/25/2006	V 22	404		47	451	ဆ	413		63.64	556		96.32		2.95	160.3		18.1	18.7	-1.5
11/30/2006	\ \ \ \	577		<b>^</b>	211	51	721	114.67	114.67	872	142.27	142.27	5.89	5.34	244.00	244.00	28.2	28.0	0.3
3/21/2007	\ V	404		× 5	5	35	452	78.3	68.90	562	94.6 6.6	94.6	4.70	3.52	169.00	169.00	18.7	18.4	0.7
6/17/2008	)	309		ස	338	<del>5</del>	84		94.27	733		120.90		4.15	205.42		23.7	21.5	4.80
8/25/2008		458		<b>~</b>	458	ß	887		103.37	834		139.85		8.02	280.93		29.10	29.10	9 0.0
11/19/2008		405		v 22	405	72	1673		190.50	1378		219.15		14.51	438.08		47.00	44.90	2.20
Minimum	0	309	534	17	338	ဧ	8	689	63.64	501	91.2	82.9	3.84	2.95	160.3	166	17.6	17.7	-1.5
Average	)	425	534	ಜ	437	<del>5</del>		83.52	92.66	733	105.37	119.88	4.73	5.78	227.89	193.75	24.7	24.2	1.0
Maximum	0	577	534	47	277	72		114.67	190.50	1378	142.27	219.15	5.89	14.51	438.08	244.00	47.0	4.9	4.8
d Deviation	,	2		13	8	12		21.13	38.56	250	24.64	37.86	0.86	3.37	77.55	36.11	8.4	œ. 1	2.1
of Samples	0	ξ.	-	4	12	12		4	12	12	4	7	4	12	12	4	12	12	12
	Sample Dete Ocation Dete (Ce-1 3/30/2004 6/14/2005 9/8/2005 11/14/2005 3/30/2006 6/13/2006 6/13/2006 11/30/2006 3/21/2007 6/17/2008 8/25/2008 11/19/2008 Maximum Average Maximum Standard Deviation Number of Samples	9/30/2004 (arCo3) 3/30/2004 (6/14/2005) 9/8/2005 11/14/2005 < 5 3/30/2006 < 5 6/13/2006 < 5 9/25/2006 < 5 11/30/2006 < 5 9/25/2006 < 5 11/19/2007 < 5 Minimum 0 Average Maximum 0 Average Maximum 0 Assimples 0	(2003) (2	(mg/l ss sections)  (accos) (mg/l)  (5 419  (5 407  (5 404  (5 404  (5 5 777  (5 401  (6 405  0 309  0 577  0 577  0 11	(mg/mg mg/mg mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m	CacCos   (mg/l) (mg/l	CacCos)         (mg/m)         (mg/m)	CacCos)         (mg/l)         (mg/l)	CacCos)         (mg/l)         (mg/l)	CacCos)         (mg/l)         (mg/l)	CacCos)         (mg/l)         (mg/l)	CacCos)         (mg/l)         (mg/l)	CacCo3   (mg/m) (mg/m	CacCo3   (mg/m) (mg/m	Caccosis         (magn)         (magn	Caccosis         (magn)         (magn	March   Marc	March   Marc	Curron   C

																										;		
	,								1	2			Colombian	Zinc		Nitrogen	Nitrogen	Nitrogen Nitrite		Journal	•	PH Semple Ph	oenhorome			Solids	Solids Total	
Semile	Ala	Aluminum Au	Arsenic B	Boron Ca	Cadmium C	Dissolved		non Dissolve Dis	Lead ma Dissolved e	E	Jesohved I	Dissolved	Dissolved	Dissolved	Conductivity		_	(mg/l as	Grease	Dissolve			Ortho-POt P	Phosphorous	Settleable	Dissolved	Suspended	Turbidity
Continue	Derte									(mg/l)			(Mg/l)	(mg/l)	(umhos/cm)	2		Î		d (mg/l)	Ha			Total		(mg/l)	(Mg/l)	(NTU)
	2				l_		Ľ	1	1		1		0.037	× 0.004		0.1	0.0	< 0.03	<2				< 0.05		< 0.1	1303	6	
											: 0.002								<b>~</b>						۸ 1.0	1925	ន	
, 0	0/8/2005					_		003			0.016								<2	10.48	8.35				< 0.1	1291	တ	6.4
·	3/0/2003 1/14/2005					-		0 03	. •		9000				1741				<2	9.6	8.46				< 0.1	1083	۸ م	7.6
_ ~	3/30/2006					-		0 03	. •		0.112				1711				<2		8.18				< 0.1	1069	9	
<b>ગ</b> લે	6/13/2006					_		0 03			0.002				1676				<b>~</b>	9.54		19.1			< 0.1	<del>1</del>	œ	<b>8</b> .9
o 6	002/00					_		800	V		: 0.002				1742		*.		<2			13.4			< 0.1	1117	œ	
2 4	1/20/2006					•	146	× 0.03	J	0.035	0.003				2285				<b>~</b> 5	13.59	7.81	17.3			< 0.1	1661	83	19.7
_ ~		> 500>	0100	A 120	< 0.00 A	< 0.01		V	0.010		0.002	< 0.005	< 0.02	× 0.004	1652	< 0.01	< 0.05	< 0.05	<2	13.25		13.6	< 0.05	0.24	< 0.1	1092	121	
<b>,</b>											: 0.002								<b>~</b>			19.3			< 0.1	1417	29.00	
۵۰	8/25/2008							0.03			0.010								<b>~</b>		-	19.40			<b>~</b> 0.1	1804 4	2.00	
, <del>,</del>	11/19/2008							0.03	<b>-</b>		0.010								< 5			15.70			< 0.1	3174	5.00	
-1		 	0	0 207	6	0		0			0.002	0.005	0.037	0	1652	<u>-</u>	9	0	0	9.54		13.4	0	0.24	0	191	S	6.4
		•	, –	2	•	•	1.49	1			0.020	0.005	0.037		1801		9.0			11.30		16.83		0.24		1498	ន	10.1
-	Maximim	_	c	į c	c	0	2.28	0	0		0.112	0.005	0	0	2285	0	0	0	0	13.59		19.4	0	0	0	3174	121	19.7
Standard Deviation	Deviation	•	,	, 6	•	,	9.0	•			0.037				240					1.97		2.63				<b>6</b> 6	\$	6.4
An imposing	Somploe	c	•	,	c	c	5	_	c		œ	-	₹	0	9	-	-	0	0	ß	9	7	0	, —	0	12	<del>-</del>	4
	Callibra	•	>	7	>	>		,	,	ı	•																	

DOGM Permit Boundary Water Quality Monitoring

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ACA CHINNYSIDE REFUSE AND SLURRY MINE	

してつつ	7170	בונים ביים	SCA - SOUTH SIDE INFLOOR SIZE				-												Cathon
		:			Alleallmiter											11.11			Anton
	Acidity	Alkalinity Bicarbonate	Alkalining Bicarbonate					<u> </u>	_	Hardness Total Callon	Macnethim	Magnesium Dissolved	n Potassium	Potassium Dissolved	Dissolved	Total	Cations		Balance
į	(mg/l as	as CaCO3	as HCO3	Cacos (mag)	Caccos (ma/l)	Chloride (mg/l)	Suffete (mg/l)		(mg/l)	(mg/l)		(mg/l)		(mg/l)	(Mgm)	S S	(meq/l)	(Lipem)	*
	(202)	i de la composition della comp					132		8	630		8		3.53	175				
3/11/2003			529	ဖ	444	<u>ئ</u>	3		9.00	3 6		Ş		2 97	183		20.9	21.6	<u>.</u> 3
6/11/2003			277	9	483	ဗ္တ	524		92.10	<b>Q</b>		5 6		8	225		25.6	27.3	-3.2
2000			730	۸	598	48	929		102.00	8		67		9 6	2		970	26.1	13.4
9/9/2003			g (	) <b>4</b>	8 4	Ą	670		102.00	737		117		4.32	677		5.5	- u	; <del>,</del>
11/18/2003			8	0	3	2 9	-		20,00	2007		111		ж ф	202		5	62.5	-
3/30/2004			564	v 2	462	47	3		3 5	60		400		3.03	194 194		22.3	8	0.7
6/28/2004			526	۸ ت	226	4	က္ဆင္တ	1	20.80	9 9	101	127 00	3.34	3 19	235.00	235.00	26.1	24.5	3.5
9/13/2004	œ		586	v 2	286	ထ္တ	561	107.00	00.701	200	3.73	157.00	)	3,68	274.00		32.00	31.1	4.
11/30/2004	, v	535		Ą	535	25	8		141.00	9 6	132 00	130.00	28.6	3.41	234.00	239.00	27.2	25.8	5.6
2/44/2005	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	466		۸ ئ	466	4	<u>¥</u>	121.00	121.00	9 0	132.00	132.00	5	4 88	240.00		27.4	27.1	9.0
6/14/2005	<b>)</b>	481		۸ ح	<b>48</b> 1	<del>4</del>	6//		119.00	845 6 6		3.5		20.6	182.00		19.7	20.0	-0.7
0/8/2005		465		27	491	ဗ္ဗ	4		86.50	20 G	00	90.00	3 68	. K	173 00	173.00	18.8	17.9	2.5
41/14/2005	۷ ک	436		સ	467	ଚ	370	81.40	81.40	260	80.70	9 6	5	9 6	157.00		18.7	17.9	2.1
3/30/2006	, v	451		< 5	451	၉	388	;	8.79 5.70	) 6	00 00	92.30	3.47	3.47	159.00	159.00	18.6	17.9	6.
6/13/2006	V 22	439		< 5	439	32	385	86.50	83.20	200	93.00	96.00	;	3 02	158.92		19.4	19.6	<b>6</b> .
9/25/2006	V .	456		జ	488	37	424	;	200.00 200.00 200.00	779	106 27	40 A 74 A 74		297	168.93	170.31	21.0	20.6	7:
11/30/2006		453		21	480	32	98	97.16	97.10	900 a	5.5	50.00	98.6	ж 8	171.00	171.00	20.0	19.7	0.8
3/21/2007		445		v 2	445	ဗ္တ	470	85.50	3 G	679	9	9 6		2.83	177.00		20.9	20.3	<del>د</del> .
6/6/2007	× 55	464		۸ ئ	<b>4</b> 64	37	481		%	000		140.00		3.71	230.00		27.2	26.3	1.7
9/26/2007	· 22	268		× 2	208	51	\$ E		3.6	3 60		119.37		3.12	183.43		22.8	23.2	<b>-0.7</b>
11/26/2007		482		35	514	42	25		88.70	573		20.00		3.57	178.89		21.3	21.7	ල ල
3/19/2008		412		숙	451	<b>4</b>	228		95.22	000		115.25		4.11	199.35		23.50	21.50	4.40
6/17/2008		259		114	373	<del>ය</del> (	617		100.48 20.05	7 7 Y		93.11	٠	2.87	184.38		19.70	20.00	9.70
8/25/2008		490		v 2	90	53	ر د و		13.02	200		97.40		3.03	182.08		_	19.40	- 8
11/19/2008		465		9	\$	88	25 25 26 26 26 26 26 26 26 26 26 26 26 26 26	,	62.33	280	R6.7	86.7		2.83	157	159	_	17.9	-3.2
Minimum		259	526	ဖ	373	<b>58</b>	3/0	0 S	79.06	9 8	107.65	110 69		3.41	195.46	191.22		22.4	9.0
Average	9	457	265	8	489	ල	ဂ္ဂ	3.5	5.75	600	13.55	157.00		4.68	274.00	239.00		31.1	4.4
Maximim		999	730	114	298	25	8	37.5	3.5	000	10.25	4 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5		0.47	30.86	35.82		3.5	<del>1.</del> 0.
Standard Deviation		S	75	၉	51	<b>~</b> ;	135	15.23	2. c	25	7.01 W		9	7	24	ဖ		23	23
Number of Samples	-	17	7	5	24	24	42	٥	5	5	,								
															Nitrogen	Nitrogen	Nitrogen Nitrogen Nitrogen	_	

	ı														l					7				Solids			
	Arser	<del>일</del>	Boron	-	Copper	10 P	hon Lead	Lead Manganes	janes Manganese stal Dissolved	nese Molybdenum Ived Dissolved			Ţ.	<b> </b>	Z Z E	te Nitrogen as (mg/l as	le Oll and se Greece	od Oxygen,	Ŧ	Sample Temp.	Phosphorous Ortho-PO4 (mg/l as P)	ss. Phosphorous Total	Solids us Settleable (min)	•	Solids Total 5 Suspended (mg/l)	d Turbidity (NTU)	
pewjossia pewjossia		<b>P</b> §	peviosei (man)		Devocation (mg/l)	_	u) (J/Bul) p			(mgm) (m		(mg/l) (m)	(mg/l) (umhos/cm	S/cm)	2	1	ı	1	Ì				× 0.1	1219	6		
tin) (Man)						L	< 0.005	0.034		2			1/54	<b>\$</b> (			, ,						<b>^</b> 0.1	1255	က		
							0 005	0.055	_	45			1769	69			, ,						< 0.1	1508	9		
							2000 ×	0.104		6/			24.	10			, ,						< 0.1	1479	თ		
							0.000			8			50				7				A 0 0 5		< 0.1	1340			
11/18/2003										2000		0.034 < 0.0	× 0 004	0.5	2 0.07	7 < 0.03	03 <2				3		,	1282			
< 0.030 < 0.010	× 0.0	910	0.201	< 0.001	< 0.010			< 0.010 O.0 o.0									× 2	~1					- ·	1475	3 0	13.0	
							< 0.030	0.0		ę :			-	2070			<b>V</b>	2 11.18	8.26				V 0.1	0.4		2	
						0.35	< 0.03	9	130 0.040	<b>5</b>			3 	2			V	•					< 0.1	7681			
9/13/2004						200	200	0.0	0.049	64							,	1111	70 0				× 0.1	1609		ტ.	
11/30/2004						5 6	8 6	0	0.031 0.027	127			- 23	2330			<i>;</i> `	7.7.					< 0.1	1601	< 2 <		
3/14/2005						7 6	3 5	; c		22							V	7					, v	1175	7	4.1	
8/4 JOOG						0.23	800	<b>S</b>		1 3							v	10.34					5	9707		0	
						0.20	< 0.03	0		90				Ş			v	2 9.70	8.37				< 0.1	545	v O	9.	
c007/8/6						0.05	< 0.03	0	020 0.011	Ξ			-	77			,						< 0.1	1132			
11/14/2005							200	Č	0.017 0.0	0.012			17	.69			,	,		2000			× 0.1	1074	16	6.3 8.3	
3/30/2006						9 6	8 8	6		0.00			17	712			v `	¥.6.		•			< 0.1	1133	7		
6/13/2006						24.0	3 6	ć		0.026			- 17	791			V	7		15.50			, v	194		17.3	
9/25/2006							3 6	óò		0.000			17	447			V	2 15.35			7	70.05		1161	9		
•						4. 8		6	0.002		< 0.005 < 0		< 0.004   16	1695 < (	< 0.1 0.	0.23 < 0	0.05	2 13.20						1203			
.0.03	<b>0</b>	× 0.010		× 0.001	0.0	<u>.</u>						< 0.02 0.				٧	8	7	9. 0 5. 6	10.00				1594			
6/6/2007   < 0.03   < 0	٧	< 0.010	0.23	< 0.001 1000	× 0.01	20.0				0 0 2 6 70 0	< 0.005				•	٧	S	7	0.40 0.40				. 0 .	1359			
< 0.03	v	< 0.010	0.24	< 0.001 100.001	< 0.01	0.41											٧	7	8.33		_		, v	1200			
_						0.39	× 0.03	<del>S</del>		87							٧	7	œ.3 <u>1</u>	•	_		- \ '	2 5	2		
						0.15	× 0.03	ö		110.0							٧	7.	8.48				0.1				
3/19/2008						8	× 0 03	Ö		600.0							' \	. u	8 45				× 0.1	•			
6/17/2008						3 6	800	C	0.013 0.0	0.008							,   `	O 4	2 6				< 0.1	•	12.00		
8/25/2008						5 6	8 8	ic		010							<b>^</b>	ام			6		c	1046		1.9	1
11/19/2008						2 2	300	١			0 005 0	0.034	0.006				0	9.64		**************************************		•	)	1328	=======================================	8.3	
Minimum 0		0	0.201	0	0	9 9 9	3 3	) )							~	.12						c	c	1852		17.3	
Average			0.22			0.46	0.03				900.0					0	0	0 17.71			<b>&gt;</b>	•	•	2			
Maximim		0	0	0	0	1.48	0	o (						212	0	8		3.15	0	9 2.54				3 2	· 6	} «	
			0.02			0.35	<b>8</b>		0.030	0.023	•	*	· •	15	_	က	0	0 7	16	7	0	٦		5		1	1
Mimber of Semples 0		0	4	0	0	24	3	٥	١	47	-	-	-													2	IABLE 2-2

DOGM Permit Boundary Water Quality Monitoring

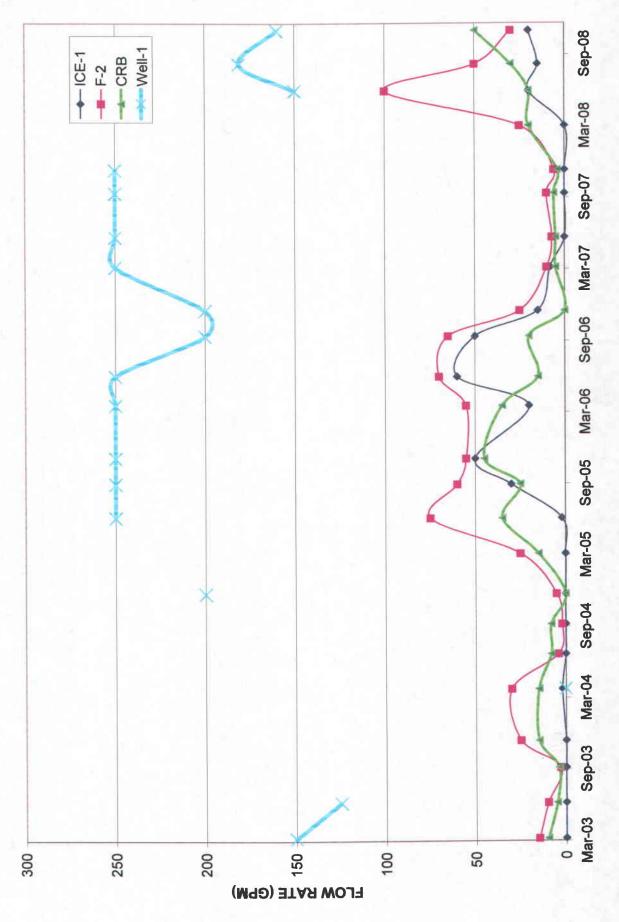
•						Alkalimity															
				Alkalinity	Alkallnity	Carbonate	Alkalinity														
	dance		Acidity	Excertoonate	Bicarbonate	<b>8</b> CG 6		Chlodde	Culfata	Calcium	Calcium	Hardness Total CoCO3	Mannachim	Megnesium Discolared	Présentim	Discolved	Sodium	Sodium Total	Saffons	Antone	Anio
	Location	Date	(cocos)	(Mgm)		(Fom)	(mg/l)		S (Su)	5		(mg/l)	Total (mg/l)	(mg/l)	Total (mg/l)	(mg/l)	(mg/l)	(VBu)	(meq/)	(meq.)	*
	CRB	3/11/2003			410	< 5	336	118	3088	-	436.00	2418		323		25.3	499.00				
		6/11/2003			406	۷ د	333	138	3460		469.00	2666		363		25.8	536.00	-	77.2	82.6	<u>က</u>
		9/9/2003			433	< 5	355	162	3838		470.00	2824		40		30.4	584.00		82.6	91.6	5.1
		11/18/2003			464	۸ ئ	380		3574		458.00	2671		371		30.4	570.00		78.9	86.4	4.5
	-	3/30/2004			415	<b>^</b>	340		3393		466.00	2696		372		26.5	522.00		77.2	<u>8</u>	-2.4
	_	6/28/2004			336	<b>6</b>	336		3474		446.00	2694		38 48		32.7	556.00		78.9	82.4	-2.2
		9/13/2004	13	352		< 5	352	126	3759	460.00	453.00	2737	415.00	390.00	38.00	35.3	554.00	606.00	79.7	88.9	-5. <b>4</b>
		3/14/2005	۸ ئ	379		< 5	379		3460	469.00	469.00	2839	405.00	405.00	32.80	30.60	653.00	674.00	85.9	83.6	4.
	_	6/14/2005		370		۸ 5	370		3750		491.00	2923		412.00		30.10	641.00		87.00	89.00	<del>-</del> -
		9/8/2005		357		v 2	357		3692		438.00	2652		378.50		26.80	590.00	-	79.30	87.40	4.00
	<b>~</b> -	11/14/2005	۸ م	375		<b>~</b>	375		3250	470.00	470.00	2714	374.00	374.00	30.60	29.30	639.00	639.00	82.80	78.80	2.4
	-	3/30/2006	< 5	346		v 2	346	131	3152		433.00	2621		374.00		25.50	521.00		75.70	76.20	0.4
	_	6/13/2006	တ	329		v 2	329		3575	487.00	466.00	2934	465.00	430.00	29.70	29.70	584.00	598.00	84.80	85.00	Ġ.
		9/25/2006	< 5	383		<b>~</b>	383		3547		456.28	2794		401.86		29.34	535.92		79.90	85.30	3.3
	ř	3/21/2007	<b>~</b>	348		<b>\$</b>	348		3520	466.00	466.00	3103	471.00	471.00	39.90	39.90	644.00	644.00	91.00	83.10	4.6
		6/6/2007	۸ ئ	338		< 5	338	128	3353		456.00	2876		422.00		28.10	583.00		83.60	80.20	2.1
		9/26/2007	\$	421		<b>2</b> ×	421		3547		494.00	3099		453.00		34.10	621.00		89.80	86.40	6:
	ν-	11/26/2007		407		v 2	407	8	3539		427.51	2737		405.42		6.51	549.99		78.80	84.20	က <u>ှ</u>
	Ī	3/19/2008		383		<b>~</b>	383	138	3471		438.11	2733		397.94		35.86	551.01		79.50	83.80	-2.7
		6/17/2008		230		< 5	230		3822		462.34	2969		440.60		42.48	694.28		90.60	87.80	89.
		8/25/2008		369		< 5	369	_	4432		460.54	2922		430.24		47.94	910.31		99.20	103.80	-2.30
	<b>~</b> -	11/19/2008		354		v 2	35 4		4119		475.36	2983		436.11		42.55	947.90			97.10	2.40
•		Minimum	6	230	336	0	230		3088	460	427.51	2418	374	323	29.7	6.51	499	298	7.5.7	76.2	-5.4
		Average	=	328	411		326		3583	470.40	459.14	2800	426.00	401.62	34.20	31.14	613.02	632.20	83.1	85.9	-1.2
		Maximum	13	421	464	0	421	163	4432	487.00	494.00	3103	471.00	471.00	39.90	47.94	947.90	674.00	99.2	103.8	4.6
	Standard	Standard Deviation	က	42	42		37	<del>2</del>	8	10.06	17.48	166	41.27	34.05	4.53	8.25	113.88	30.78	0.9	6.1	2.9
	Number o	Number of Samples	7	16	9	0	22		22	2	22	22	2	22	2	22	22	5	20	21	77

	Aluminum	Arsenic	Boron	Cadmium	Copper	<u> </u>	<u>ة</u> د	_	Manganes Man	Manganese Moly	Molybdenum Sek	Selenium 2	Zinc	ž ž	Nitrogen Nit Ammonia N	Nitrogen Nitrogen Nitrate Nitrite	gen its Oil and		ę	PH Sample	Phosphorous	_	Solids	Solids	Solids Tota	i.
Sample Location Date	Dissolved (mg/l)		Dissolved (mg/l)	Dissolved Dissolved (mg/l)	Dissolved (mg/l)	_	Dissolve Dissolved d (mg/l) (mg/l)						2	Conductivity (m (umhos/cm)				se Dissolve (I) d (mg/l)	£	Temp. (deg C)		Phosphorous Settleable Total (ml/l)	s Settiesbie (m/l/)	7	Suspended (mg/l)	Turbidity (NTU)
CRB 3/11/2003					l	ı	i						_	1220			v	٠.					< 0.1	5162	17	
6/11/2003						0.108 <	< 0.025	_	0.06	0.026				5520			.7 V	۸.					<b>~</b> 0.1	5525	ო	
9/9/2003							< 0.005	J		245				2800			` <b>,</b>	۲.					< 0.1	5803	× 2	
11/18/2003							0.007	J		140				57.10			v	۸.					< 0.1	5637	<b>~</b> 5	
3/30/2004	< 0.030	< 0.010	1.2	< 0.001	< 0.010 <	_	_	< 0.010 <		-	< 0.005 0	0.04	× 0.004		< 0.1	0.35 < 0.	< 0.03 < 2	۸.			< 0.05		< 0.1	5247	v 2	
6/28/2004						0.152	< 0.030	_		.055				394			v	۸.					<b>^</b> 0.1	5747	< <del>5</del>	
9/13/2004							< 0.03	J		600				5840			V	2 10.28	8 7.89				<b>^</b> 0.1	5825	< <del>2</del>	3.0
3/14/2005							< 0.03	ی		.015			_	3450			v	77.3	1.8 7.				< 0.1	5968	× 5	0.5
6/14/2005							< 0.03	J		.005							٧	۷.					< 0.1	5641	۸ 5	
9/8/2005							< 0.03	ی		5005							<b>v</b>	9.60	0 7.90				< 0.1	5888	< 5	6.1
11/14/2005							< 0.03	J		.291				3270			V	2 12.09	_				< 0.1	5734	< <del>5</del>	3.5
3/30/2006							< 0.03	J		.034			_	3180			v	۷.	8.03				<u>&lt; 0.1</u>	5476	× 5	
6/13/2006						0.26	< 0.03	J		.084				6500			v	2 8.46	•				< 0.1	2996	တ	1.2
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9/26/2007			1.71	< 0.001	< 0.01									•	0.1			۷.	8.19					609	× 5	
11/26/2007										.102							٧	۲.	8.09				۸ 0.1	5647	۸ ئ	
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8/25/2008							< 0.03	J		0.002							Ÿ	ıc	8.17				۰0°	7242	۸ 5	
11/19/2008	~						× 0.03	J		.010							< 5						< 0.1	6971	2.00	
Minimum	0	0	1.2	0	0		0.007			.005	0		0.005	394	0		0 0				0	0	0	5162	က	0.5
Average			1.49			0.23	0.02	ی		1.125	O	0.040		5625	_	0.26		11.7						5887	5	2.0
Maximum	0	0	7	0	0	0.75	0	0		1.180	0.000			6500	0	0	0	17.37		20.0	0	0	0	7242	92	3.5
Standard Deviation	_		0.21			0.19	0.02	J		0.271				1550	-	0.09		3.1						483	ထ	1,2
Number of Samples	0	0	4	0	0	4	7	0	21	19	0	_	_	4	0		0				0	0	0	22	7	\$

DOGM Permit Boundary Water Quality Monitoring

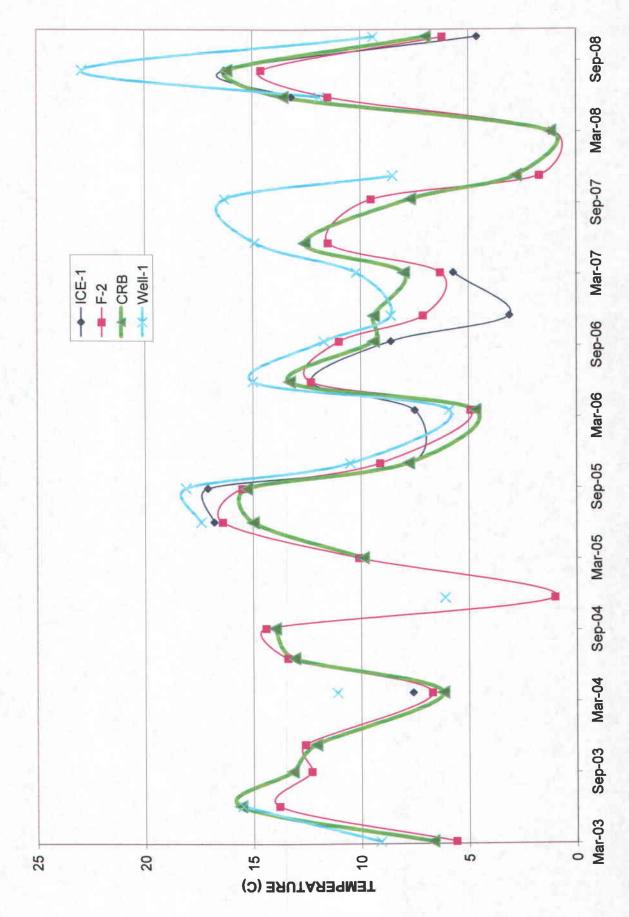
## ## ## ## ## ## ## ## ## ## ## ## ##	Alkatinity Garbonate Bicarbonate as CO3 or as HCO3 CaCO3 or as HCO3 or as	Alkalinky  3. or Tobal any  (mg/l)  (m	Chiorida (mgn) 67 75 75 75 75 75 75 75 75 75 75 75 75 75	**************************************	Cakelum Total (mg/l) (mg/l) 72.60 72.60 47.62 86.30	Catclum Dissolved (mg/ll) C2.20 64.90 64.90 64.70 64.70 64.70 64.70 64.70 64.70 64.70 64.70 68.50 68.50 68.50 68.50 72.60 77.26 77.59 75.50 75.5	Hardness Total CacOS (mg/l) (mg/l) (mg/l) (542 578 333 357 777 268 420 400 455 777 528 550 550 550 550 550 550 550 550 550 55	Magnesium  Total (mg/l)  59.6  66.50  42.33  75.90  61.08	(mg/l) 93.9 101.00 33.70 60.5 58.70 75.00 83.30 75.00 83.30 86.91 68.12 69.33 75.00 83.30 80.32 36.91 68.12 69.10 69.10	9 Potessium Total (mg/l) 3.02 3.05 1.85 2.95 2.72 2.72	Potessium Dissolved (mg/n) 2.36 2.19 2.26 2.26 2.298 2.298 2.298 2.274 2.74 2.74 3.47 3.47 3.47 3.47 3.47 3.47 3.47 3	Sodium Dissolved (mg/l) 126 127 127 131.00 24.7 120.00 124.00 127.00 119.11 28.71 131.00 130.00 136.23 25.84 118.52 1118.11 24.7 107.57 107.57	Sodium Total (mg/l) 128.00 116.00 28.99 131.00	(meq/l) (meq/l) (meq/l) (meq/l) (meq/l) (17.1 17.3 6.5 13.7 13.5 16.5 16.4 14.2 16.4 17.4 0.20.10 6.4 14.40 14.40 14.40 14.40 14.40 6.4	Anions (meg/l)	Anion / Anion
528	· <del>-</del>	_		391	86.30	91.30	578	75.90	101.00	3.05	6.19	136.23	131.00	20.1	19.4	5.5
<b>9</b>	4	2	8	ŧ:	16.17	14.27	<u>දි</u> ද	14.17	19.76	0.58	1.05	37.89	4.84	0.4 0.4	3. t	5. t
	c	9	đ	ā	~	×	×	4	ž	4	201	0	4	/	-	=

																Z	Iltrocen			ă	<b>7</b>			Sol	8		
	Aluminum	um Arsenic	Boron	Cadmium	Copper	non T	Iron	Lead		Manganese N	Molybdenum Dissolved	Selentum Dissolved	Zinc	Conductivity	Ammonia (mg/l as	Nitrate (mg/l as (		Oil and Ox Grease Did	Oxygen, Dissolve	Sample Temp.	<u>.                                    </u>		Solids Phosphorous Settleable	ids Total	8 8		di V
Sample Location Date			_				d (mark	(Mg/l)				(Mg/l)	(mg/l)	(umpos/cm)						beb) Hd			- 1	1	(mg/l)	EES.	5
2	╄						١.		i	0.005				1528				<2					V	_	4 > 5		
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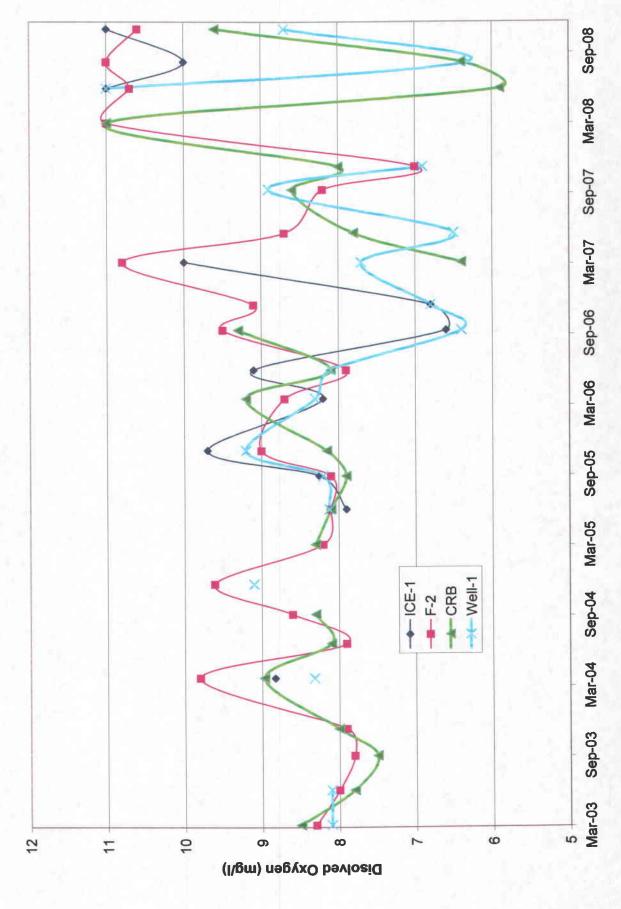


SCA WATER MONITORING

# WATER TEMPERATURE 2003-2008

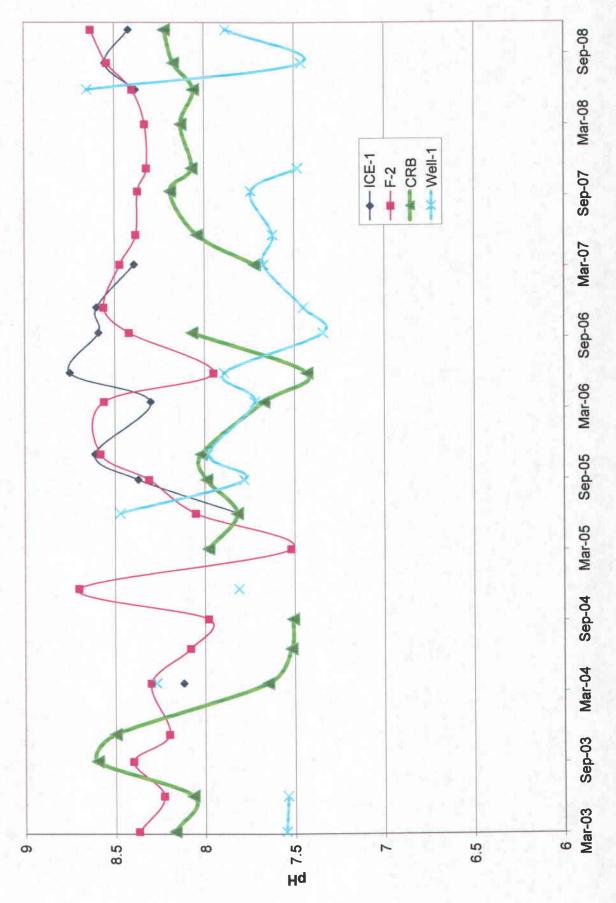


# **DISOLVED OXYGEN 2003-2008**



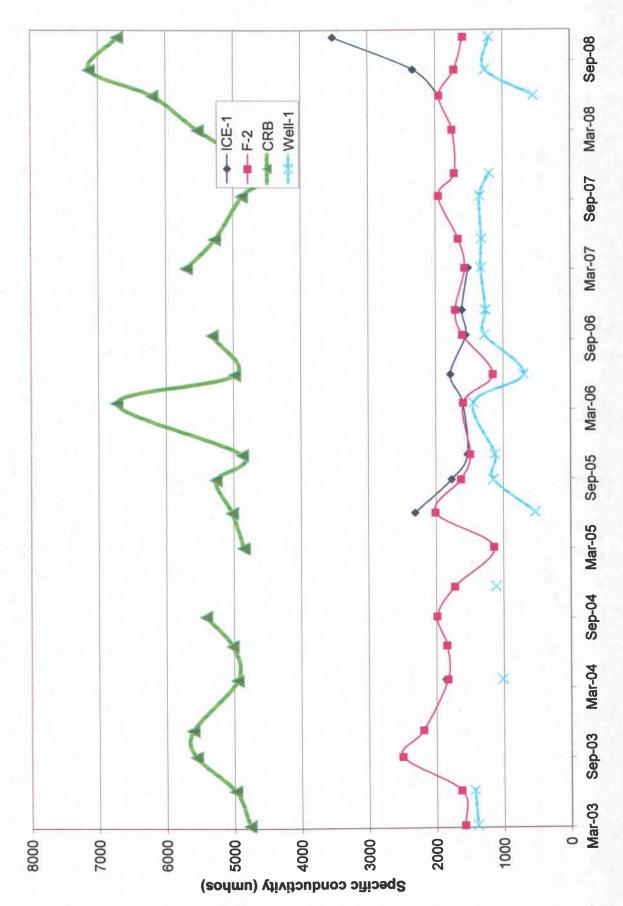
SCA WATER MONITORING

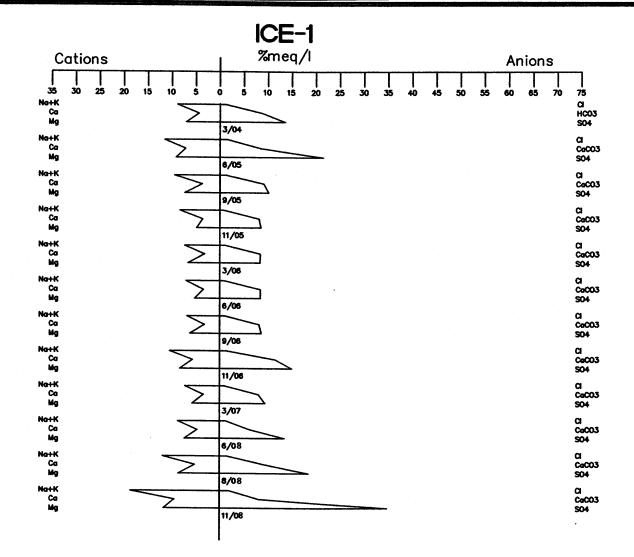
# WATER pH 2003-2008



SCA WATER MONITORING

# SPECIFIC CONDUCTIVITY 2003-2008



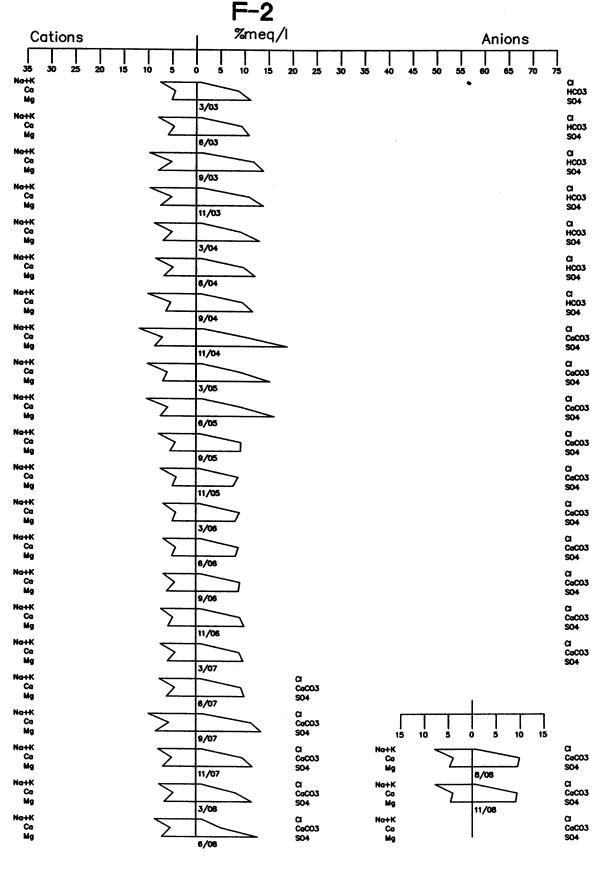




TWIN PEAKS

Engineering & Land Surveying 1880 MORTH 800 EAST LEN, UTAH 84043 (801) 480-3811, (801) 438-0700 FAX SUNNYSIDE COGENERATION ASSOCIATES SURFACE & GROUND WATER MONITORING SITES WATER QUALITY ANALYSIS 2003 - 2008

1"=20'	PROJECT NO.
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Checked by: SSC	$1^{6}$



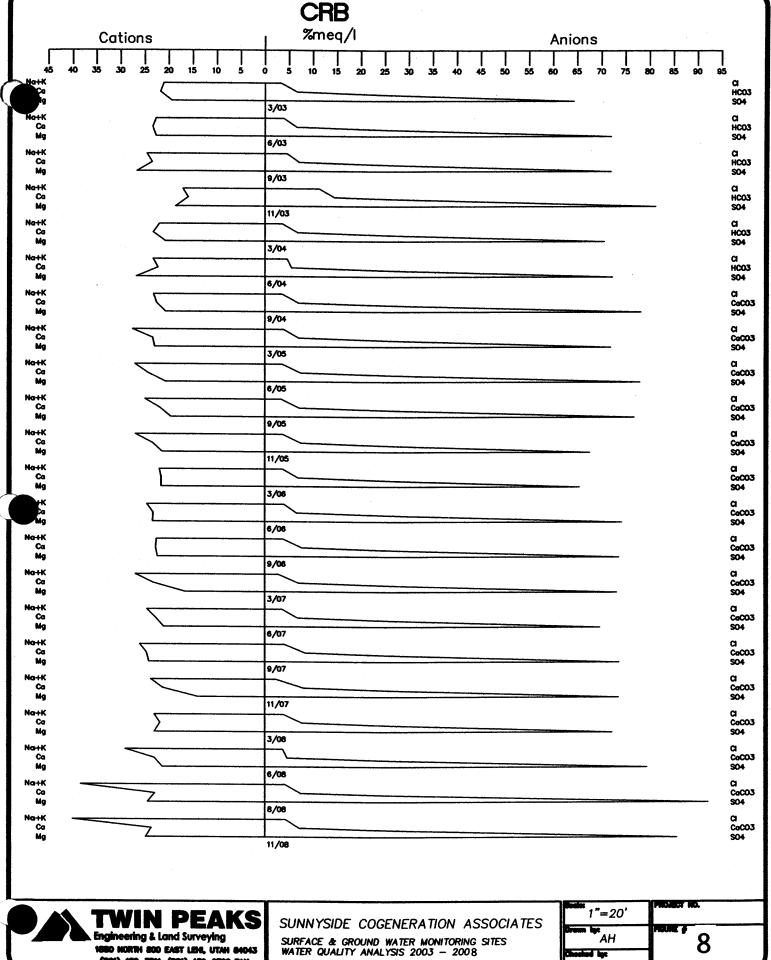


Engineering & Land Surveying 1880 HORTH 800 EAST LEH, UTAH 84043 (801) 450-3511, (801) 439-0700 FAX

SUNNYSIDE COGENERATION ASSOCIATES

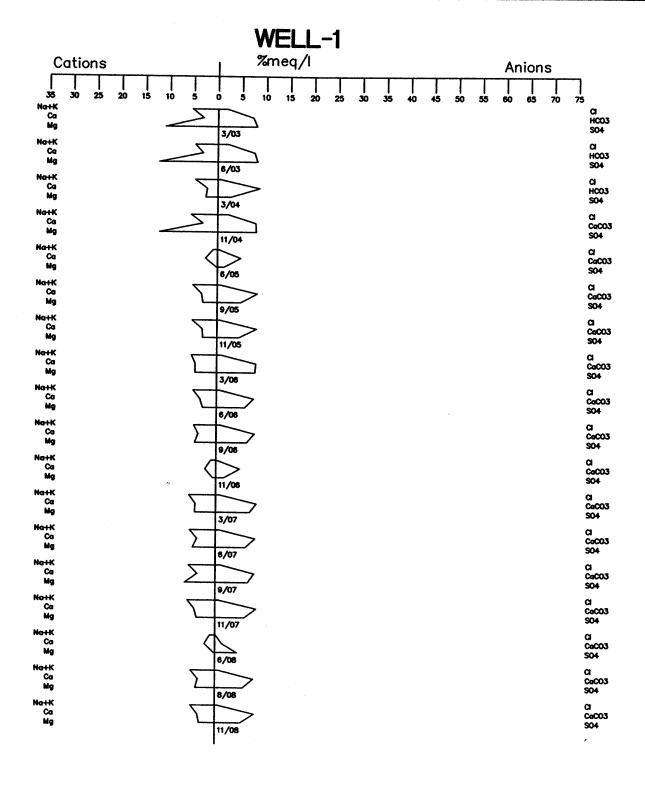
SOMMISIDE COGENERATION ASS	OUIF
SURFACE & GROUND WATER MONITORING S WATER QUALITY ANALYSIS 2003 - 2008	ITES

1"=20'	PROJECT NO.
AH	77 T7
Checked by: SSC	7 / .



1880 HORTH 800 EAST LENE, UTAH 84043 (801) 460-3811, (801) 439-0700 FAX

	PROBER NO.
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Checked by: SSC	7 °





TWIN PEAKS

Engineering & Land Surveying 1880 NORTH 800 EAST LEN, UTAM 84043 (801) 480-3811, (801) 438-0700 FAX SUNNYSIDE COGENERATION ASSOCIATES

SURFACE & GROUND WATER MONITORING SITES WATER QUALITY ANALYSIS 2003 - 2008

1"=20"	PROJECT NO.
AH	PROOF 7
Checked by: SSC	7 9



# APPENDIX C DEPARTMENT OF COMMERCE CERTIFICATES OF EXISTENCE



### **Utah Department of Commerce**

### **Division of Corporations & Commercial Code**

160 East 300 South, 2nd Floor, PO Box 146705 Salt Lake City, UT 84114-6705 Service Center: (801) 530-4849 Toll Free: (877) 526-3994 Utah Residents

Fax: (801) 530-6438
Web Site: http://www.commerce.utah.gov

04/29/2009 4911242-015004292009-3202250

### **CERTIFICATE OF EXISTENCE**

**Registration Number:** 

4911242-0150

**Business Name:** 

SUNNYSIDE COGENERATION ASSOCIATES

Registered Date:

April 24, 2001

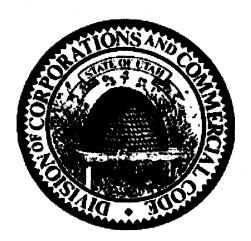
**Entity Type:** 

DBA

**Current Status:** 

**Good Standing** 

The Division of Corporations and Commercial Code of the State of Utah, custodian of the records of business registrations, certifies that the business entity on this certificate is authorized to transact business and was duly registered under the laws of the State of Utah. The Division also certifies that this entity has paid all fees and penalties owed to this state; its most recent annual report has been filed by the Division (unless Delinquent); and, that Articles of Dissolution have not been filed.



Hathy Berg

Kathy Berg Director

Division of Corporations and Commercial Code



### **Utah Department of Commerce**

**Division of Corporations & Commercial Code** 

160 East 300 South, 2nd Floor, PO Box 146705 Salt Lake City, UT 84114-6705 Service Center: (801) 530-4849 Toll Free: (877) 526-3994 Utah Residents

Fax: (801) 530-6438
Web Site: http://www.commerce.utah.gov

04/29/2009 2113550-018104292009-3444290

### **CERTIFICATE OF EXISTENCE**

**Registration Number:** 

2113550-0181

**Business Name:** 

SUNNYSIDE II, L.P.

Registered Date:

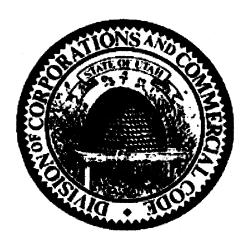
December 30, 1994

**Entity Type: Current Status:** 

Limited Partnership - Foreign

**Good Standing** 

The Division of Corporations and Commercial Code of the State of Utah, custodian of the records of business registrations, certifies that the business entity on this certificate is authorized to transact business and was duly registered under the laws of the State of Utah. The Division also certifies that this entity has paid all fees and penalties owed to this state; its most recent annual report has been filed by the Division (unless Delinquent); and, that Articles of Dissolution have not been filed.



Hathy Berg

Kathy Berg Director

Division of Corporations and Commercial Code



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Toll Free: (877) 526-3994 Utah Residents
Fax: (801) 530-6438

Web Site: http://www.commerce.utah.gov

04/29/2009 1215877-014304292009-16975

### **CERTIFICATE OF EXISTENCE**

**Registration Number:** 

1215877-0143

**Business Name:** 

SUNNYSIDE HOLDINGS I, INC.

**Registered Date:** 

December 30, 1994

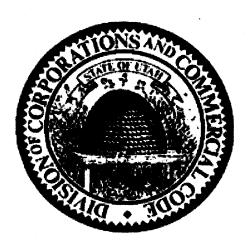
**Entity Type:** 

Corporation - Foreign - Profit

**Current Status:** 

**Good Standing** 

The Division of Corporations and Commercial Code of the State of Utah, custodian of the records of business registrations, certifies that the business entity on this certificate is authorized to transact business and was duly registered under the laws of the State of Utah. The Division also certifies that this entity has paid all fees and penalties owed to this state; its most recent annual report has been filed by the Division (unless Delinquent); and, that Articles of Dissolution have not been filed.



Hathy Berg

Kathy Berg Director

Division of Corporations and Commercial Code



### APPENDIX D MINE MAP

As required under R645-302-525-270



# APPENDIX E-1 DOGM LETTER RENEWAL OF MINING AND RECLAMATION PERMIT

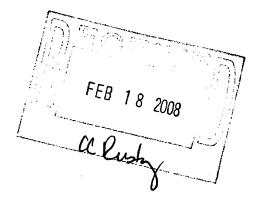


### State of Utah DEPARTMENT OF NATURAL RESOURCES Division of Oil, Gas & Mining

MICHAEL R. STYLER Executive Director

JOHN R. BAZA Division Director

February 4, 2008



Michael Blakey, Plant Manager Sunnyside Cogeneration Associates P.O. Box 159 Sunnyside, Utah 84539

Subject: Five-Year Permit Renewal, Sunnyside Cogeneration Associates, Sunnyside Refuse and

Slurry, C/007/0035, Task ID #2842, Outgoing File

Dear Mr. Blakey:

The Division of Oil, Gas and Mining has reviewed your application for permit renewal and has made a decision to approve this application. Enclosed is the renewed permanent program mining permit for the Sunnyside Refuse and Slurry and a copy of the State's Decision Document.

Two (2) copies of the permit are included. Please have both copies signed by the responsible official for Sunnyside Cogeneration Associates and return one to the Division.

Sincerely.

John R. Baza

Director

an

**Enclosures** 

J. Fulton, OSM

Price Field Office

O:\007035.SRS\FINAL\PERMIT\2008RENEWAL\WG2842\COVER LETTER.DOC